



VG4 Modular Camera System

VG4-200 | VG4-300 | VG4-500i



BOSCH

en User's Manual

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1 Getting Started

Install and wire the AutoDome according to the Bosch AutoDome Modular Camera System Installation Manual. A typical system includes a keyboard, matrix switcher, monitor, and appropriate wiring connections. Please refer to the individual product manuals for complete installation and setup instructions for each of the system components.

1.1 Powering On

When you turn the AutoDome power on there is a ten (10) second pause before the dome starts its homing phase. During the homing phase the camera pans left and right and tilts up and down. It also adjusts the lens focus. The entire homing phase lasts approximately 40 seconds and ends with a splash screen.

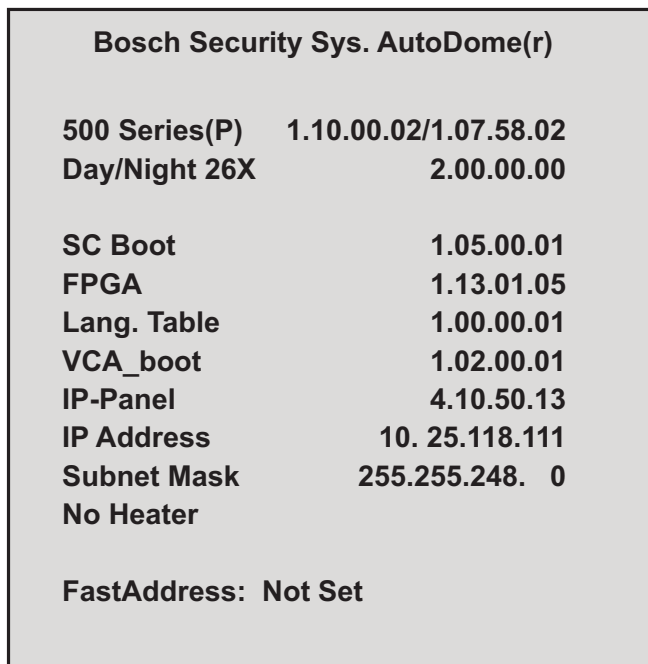


Figure 1.1 Sample VG4 Startup Splash Screen

The splash screen displays the type of AutoDome, the camera installed, the firmware levels for various files, and the current IP address (if the AutoDome contains the IP Communications module). The (P) to the right of the AutoDome series indicates that the AutoDome contains the optional modules for maintaining internal pressure.

1.2 Establishing AutoDome Control

The most common ways to interface with the AutoDome are:

- Using a keyboard and on-screen display (OSD) menus. This method is the most common and is covered in this manual.
- Using the AutoDome Configuration Tool software running on a PC with Bilinx or the RS-232/485 communication protocol. Refer to the *CTFID User Manual* for instructions.
- Using a PC-based graphical user interface (GUI) such as the Bosch DiBos 8 software. Refer to the DiBos 8 User Guide for instructions.
- Using the Bosch IP Web interface included with the IP Communications Module.

1.2.1 Basic Keyboard Operation

The following tables summarize the basic operations for a standard keyboard and the functions available to control an AutoDome camera.

Typical Keyboard Features	Usage
Function Keys	Selects a specific control setting.
Number Keys	Inputs a number from 0 to 9.
Camera Key	Selects a camera number.
Enter Key	Inputs a selection.
Focus Key	Sets the lens focus or makes a menu selection in OSD mode.
Iris Key	Sets the lens iris setting or makes a menu selection in OSD mode.
Key LEDs	Indicates an active key.
LCD	Displays the current status.
Joystick	Controls a pan/tilt/zoom (PTZ) AutoDome camera.

Table 1.1 Typical Keyboard Functions

Dome Operation	How to control
To Pan Side to Side	Move the joystick left or right.
To Tilt Up and Down	Move the joystick forward and back.
To Zoom In	Twist the joystick clockwise.
To Zoom Out	Twist the joystick counterclockwise.

Table 1.2 Typical Keyboard Controls for an AutoDome Camera

1.2.2 Keyboard Commands

Keyboard control commands are composed of a sequence of three (3) inputs with the following convention: 1) a **Function** key + 2) a **Command** number key(s) + 3) the **Enter** key.

- Depending on the type of keyboard, the control function keys are labeled:

ON or **AUX ON**

OFF or **AUX OFF**

SET or **SET SHOT**

SHOT or **SHOW SHOT**



NOTICE! The convention used for control key commands in this manual is ON, OFF, SET, and SHOT. Refer to your keyboard manual for the key naming conventions.

- Command numbers range from 1 to 999. See *Section 6 Keyboard Commands by Number*, page 43 for a complete list of keyboard commands.
- The **Enter** key can also be labeled with the 8 symbol.

For example, the keyboard command to make the AutoDome pan 360° continuously is:

ON-1-ENTER(press the **ON** key, then press the number **1** key, and then press **ENTER**.)

1.3 Setting the Camera Address

Once the AutoDome power is turned on and homing is complete, you must set the camera address. You may also want to assign a password and customize some of the AutoDome default settings.



NOTICE! You do not need to set a camera address if using Bilinx or Ethernet communication. See the *AutoDome Modular Camera System Installation Manual* to configure an AutoDome for Bilinx or Ethernet operation.

1.3.1

FastAddress

FastAddress is an AutoDome feature that allows you to set or change a camera address using the keyboard and on-screen menus.

There are three (3) **FastAddress** commands:

- **ON-999-ENTER:** Displays and programs all cameras without an address in the system.



NOTICE! If a keyboard is set to a camera number that already has an address, that camera also responds to this command.

- **ON-998-ENTER:** Displays and programs all cameras with or without an address in the system.
- **ON-997-ENTER:** Displays the current address status of all cameras in the system simultaneously.

To set an address for a camera without an address:

1. Select the camera number you want to **FastAddress**. The system displays the camera number on the keyboard and the image on the corresponding monitor.
2. Press **#-ENTER** (where # is the camera number without an address).
3. Press **ON-999-ENTER** to invoke an on-screen display of cameras on the system without an address.
4. Follow the on-screen instructions. You receive an on-screen confirmation when the **FastAddress** is complete.

To change or clear an address for a camera with an address:

1. Select the camera number you want to **FastAddress**. The system displays the camera number on the keyboard and the image on the corresponding monitor.
2. Press **#-ENTER** (where # is the camera number with an address).
3. Press **ON-998-ENTER** to invoke an on-screen display of all cameras on the system, with or without an address.
4. Follow the on screen instructions. You receive an on-screen confirmation when the **FastAddress** is complete.



NOTICE! **FastAddress** is stored in nonvolatile memory and does not change if the power is turned off or if the default settings are restored.

1.4 Setting Passwords

Passwords are used to control access to locked command menus. Unlocked commands are available to all users. Passwords are four (4) digits in length.

1.4.1 Special Passwords

Password	Security Level
0000 (default)	Enables security and requires a user to enter the unlock command OFF-90-ENTER before invoking a locked command.
9999	Disables all security and allows all users to access locked commands.

To set or change a password (locked command):

1. Press **OFF-90-ENTER** to turn off the command lock.
2. Press **SET-802-ENTER** to access the password menu.
3. Tilt the joystick up or down to choose a number. Tilt the joystick right to move to the next number position.
4. Follow the on-screen instructions and save the password. You receive an on-screen confirmation.

2 On-Screen Display Menu Navigation

The AutoDome is programmed through the on-screen display (OSD) menus. To access the **OSD** menus, you must open the main **Setup Menu**.

Menu items marked with an asterisk (*) are default settings, unless otherwise noted.



NOTICE! After a period of 4.5 minutes of inactivity, a menu times-out and exits without warning. Some unsaved settings in the current menu can be lost.

2.1 Setup Menu

The main **Setup Menu** provides access to all programmable AutoDome settings. It is a locked menu that requires the user to turn off the command lock.

To open the main Setup Menu (locked command):

1. Press **OFF-90-ENTER** to turn off the command lock.
2. Press **ON-46-ENTER** to access the **Main Menu**.
3. Use the joystick to highlight a menu item.
4. Press **Focus/Iris** to open a menu.
5. Follow the on-screen instructions.



NOTICE! The AutoDome displays only those menus applicable to the AutoDome Series configuration. Use the joystick to navigate through the menu and the **Focus/Iris** keys to make a selection.

Setup Menu
Exit...
Camera Setup
Lens Setup
PTZ Setup
Display Setup
Communication Setup
Alarm Setup
Language
Advanced
Diagnostics
Focus / Iris: Select

Setup Menu Choices:

Menu	Description
Exit	Exits the menu.
Camera Setup	Accesses adjustable camera settings such as: white balance, gain, sharpness, sync, line lock, backlight, shutter, and night mode.
Lens Setup	Accesses adjustable lens settings such as: focus, iris, zoom speed, and digital zoom.
PTZ Setup	Accesses adjustable pan/tilt/zoom (PTZ) settings such as: Autopan, tours, PTZ speed, inactivity period, AutoPivot, and tilt limits.

Menu	Description
Display Setup	Accesses adjustable display settings such as: OSD, sector blanking, and privacy masking.
Communication Setup	Accesses communication settings such as: AutoBaud and Bilinx.
Alarm Setup	Accesses the alarm settings such as: inputs, outputs, and rules (not available with 200 Series models).
Language	Displays the language.
Advanced	Accesses the advanced features menu including Stabilization, AutoTrack Sensitivity, Camera Height, and Virtual Masking (only available on 500i Series models).
Diagnostics	Displays the status of diagnostic events.



NOTICE! To select the **Exit Menu** item from anywhere in the current menu, use the Zoom command.

2.2

Camera Setup Menu

The **Camera Setup Menu** provides access to camera settings that can be changed or customized. Menu items marked with an asterisk (*) are the default settings.

Camera Setup	
Exit...	
* White Bal:	EXT ATW
* Gain Control:	AUTO
* Max. Gain Level:	6 (4**)
* Sharpness	12
* Synch Mode:	Internal
* Line Lock Delay:	0
* Backlight Comp:	OFF
* WDR	OFF
* Shutter Mode:	Auto SensUP
* Shutter:	1/60
* Auto SensUP Max:	15x
* Night Mode:	AUTO
* Night Mode Color:	OFF
* Night Mode Threshold:	55
* Pre-Comp	1
Restore Defaults...	
* = Factory Setting	
** = WDR camera only	
Focus / Iris:	Select

Camera Setup Menu Choices:

Menu	Description	Sub-menu / Description	Default Setting
Exit	Exits the menu.		
White Balance	Maintains proper color reproduction as the color temperature of a scene changes. For example, from daylight to fluorescent lighting.	Extended ATW: Adjusts camera color using extended range. ATW: Adjusts camera color constantly. Indoor W.B.: Optimizes camera color for typical indoor conditions. Outdoor W.B.: Optimizes camera color for typical outdoor conditions. AWB Hold: Sets the camera's color settings for the current scene. Manual: Allows a user to adjust the Red and Blue gain. Sliding scale: – (1 to 100) +	Extended ATW
Gain Control	Electronically brightens darker scenes which may cause graininess in low light scenes.	Auto or OFF	AUTO
Max. Gain Level	Adjusts the maximum gain level that the gain control adjusts to when set to AUTO .	Sliding scale: – (1 to 6) + (1=8db, 2=12db, 3=16db, 4=20db, 5=24db, 6=28db)	6 (4 for 36X camera)
Sharpness	Adjusts the sharpness level of the picture.	Sliding scale: – (1 to 16) +	12
Synch Mode	Sets the type of synchronization mode for the camera.	INTERNAL: Synchronizes camera to an internal crystal. This choice is recommended if there is noise on the power line. LINE LOCK: Synchronizes camera to AC power. This choice eliminates picture roll in multi-camera systems.	INTERNAL
Line Lock Delay	Optimizes the LINE LOCK mode to eliminate picture roll in multiphase power applications.	Sliding scale: – (0° to 359°) +	0°
Backlight Comp	Improves image quality when the background illumination level is high.	ON or OFF	OFF
WDR	Turns the wide dynamic range feature on or off.	ON or OFF	OFF
Shutter Mode:	Turns Auto SensUP on or off.	Auto SensUP or OFF	Auto SensUP

Menu	Description	Sub-menu / Description	Default Setting
Shutter	Adjusts the electronic shutter speed (AES).	Sliding scale: – (60 at extreme left to 1/10000) +	1/60 sec. (NTSC) or 1/50 sec. (PAL)
Auto SensUP Max.	Sets the limit for sensitivity when the shutter speed is set to Auto SensUP.	15x, 7.5x, 4x, or 2x	15x
Night Mode (Day/Night models only)	Selects night mode (B/W) to enhance lighting in low light scenes.	ON, OFF, or AUTO	AUTO
Night Mode Color (Day/Night models only)	Determines if color processing remains in effect while in night mode.	ON or OFF	OFF
Night Mode Threshold (Day/Night models only)	Adjusts the level of light at which the camera automatically switches out of night mode (B/W) operation.	Sliding scale: –(10 to 55)+ (in increments of 5) 10 is earlier, 55 is later	55
Pre-Comp (not applicable with IP AutoDome models)	Amplifies the video gain to compensate for long distance cable runs.	Sliding scale: –(1 to 10)+	1
Restore Defaults	Restores all default settings for this menu only.		

2.3 Lens Setup

The **Lens Setup Menu** provides access to lens settings that can be changed or customized. Menu items marked with an asterisk (*) are the default settings.

Lens Setup	
Exit...	
* Auto Focus:	SPOT
* Auto Iris:	CONSTANT
* Auto Iris Level:	8
* Focus Speed:	2
* Iris Speed:	5
* Max Zoom Speed:	FAST
* Digital Zoom:	ON
Restore Defaults	
* = Factory Setting	
Focus / Iris: Select	

Lens Setup Menu Choices:

Menu	Description	Sub-menu / Description	Default Setting
Exit	Saves and exits the menu.		
Auto Focus	Automatically focuses on the subject in the center of the screen.	CONSTANT: Auto Focus is always active, even while the camera is moving. MANUAL: Auto Focus is inactive; manual focus must be used. SPOT: The camera activates Auto Focus after the camera stops movement. Once focused, Auto Focus is inactive until the camera moves again.	SPOT
Auto Iris	Automatically adjusts to varying light conditions.	MANUAL: Iris must be adjusted manually. CONSTANT: Auto Iris is constantly active.	CONSTANT
Auto Iris Level	Reduces the camera's iris level for proper exposure.	Sliding scale: – (1 to 15) +	8
Focus Speed	Adjusts the manual focus speed.	Sliding scale: – (1 to 8) +	2
Iris Speed	Adjusts the manual iris speed.	Sliding scale: – (1 to 10) +	5
Max. Zoom Speed	Adjusts the manual zoom speed.	SLOW, MEDIUM, or FAST	FAST

Menu	Description	Sub-menu / Description	Default Setting
Digital Zoom (not available with 200 Series models)	Enables digital zoom.	OFF or ON	ON
Restore Defaults	Restores all default settings for this menu.		

2.4 PTZ Setup Menu

The **PTZ Menu** provides access to pan/tilt/zoom settings that can be changed or customized. Menu items marked with an asterisk (*) are the default settings.

PTZ Setup	
Exit...	
* AutoPan:	30 deg/sec
* Tour 1 Period:	5 sec
* Tour 2 Period:	5 sec
* PTZ Fixed Speed:	4
* Inactivity:	OFF
* Inact. Period	2 min
* AutoPivot:	ON
* AutoDome Orientation	NORMAL
* Freeze Frame on Preposition	ON
Tilt Up Limit...	
Restore Defaults	
* = Factory Setting	
Focus / Iris: Select	

PTZ Menu Choices:

Menu	Description	Sub-menu / Description	Default Setting
Exit	Exits the menu.		
AutoPan	Adjusts speed of camera during AutoPan and AutoScan.	Sliding scale: – (1°/sec. to 60°/sec.) +	30°/sec.
Tour 1 Period	Changes dwell time between presets during the tour.	Sliding scale: – (3 sec. to 10 min.) +	5 sec.
Tour 2 Period (not available with 200 Series models)	Changes dwell time between presets during the tour.	Sliding scale: – (3 sec. to 10 min.) +	5 sec.

Menu	Description	Sub-menu / Description	Default Setting
PTZ Fixed Speed	Sets pan and tilt speed when controlled by a fixed speed controller.	Sliding scale: – (1 to 15) +	4
Inactivity	Selects the mode that an AutoDome reverts to after the period of inactivity set in the inactivity period.	Scene 1: Returns to Preset 1. Prev Aux: Returns to previous activity, such as Aux commands 1, 2, 7, 8, 50, or 52. OFF: Remains on the current scene indefinitely.	OFF
Inactivity Period	Sets the time period of inactivity before the above action occurs.	Sliding scale: – (3 sec. to 10 min.) +	2 min.
AutoPivot	Automatically rotates the camera 180° when following a subject traveling directly beneath the camera.	OFF or ON	ON
AutoDome Orientation (not available with 18x color camera)	Automatically rotates the video 180°.	INVERTED or NORMAL	NORMAL
Freeze Frame On Preposition (not available with 18x color camera)	Holds a preposition video frame while moving to another preposition.	OFF or ON	ON
Tilt Up Limit...	Sets the upper tilt limit of the camera.	Use joystick to move to a scene.	
Restore Defaults	Restores the default setting for this menu only.		

2.5 Display Setup Menu

Provides access to display settings that can be changed or customized. Menu items with an * are the default settings.

Display Setup	
Exit...	
* Title OSD:	MOMENTARY
* Camera OSD:	ON
Display Adjust:	
Sector Blanking...	
Privacy Masking...	
Edit Sector Title	
Edit Scene Title	
Restore Defaults	
* = Factory Setting Focus / Iris: Select	

Display Setup Menu Choices:

Menu	Description	Sub-menu / Description	Default Setting
Exit	Saves and exits the menu.		
Title OSD	Controls how the OSD displays sector or shot titles.	OFF: Titles are hidden. ON: Titles are displayed continuously. MOMENTARY: Titles are displayed for a few seconds then disappear from the screen.	MOMENTARY
Camera OSD	Controls how the OSD displays camera response information, such as Digital Zoom, Iris open/close, and Focus near/far.	OFF or ON	ON
Display Adjust	Adjusts the text brightness and vertical position of the on-screen title.	Exit: Exits the menu. Up: Moves screen title up. Down: Moves screen title down. Brighter: Brightens the intensity of the on-screen text. Darker: Darkens the intensity of the on-screen text.	
Sector Blanking (not available with 200 Series models)	Allows video blanking of selected sectors. Available sectors are 1 through 16. Follow the on-screen instructions.	Exit: Exits the menu. Sector (1-16): Press Focus/Iris to blank or clear a sector.	

Menu	Description	Sub-menu / Description	Default Setting
Privacy Masking (not available with 200 Series models)	Allows masking of sensitive areas. Up to 24 privacy masks are available, with a maximum limit of eight (8) to a scene.	Exit: Saves and exits menu. Mask: 1 to 24 masking areas. Follow the on-screen instructions to set a mask. See <i>Section 7.1 Alarm Rules (300 and 500i Series Only)</i> , page 46. Restore Defaults: Restores the default settings for this menu only.	
Edit Sector Title	Allows editing existing Sector (Zone) Titles	Select a sector title to access the character palette. See <i>Section 3.3 Specifying a Shot or a Sector Title</i> , page 30, for instructions.	
Edit Scene Title	Allows editing existing Scene (Shot) Titles	Select a scene title, then choose a menu option: <ul style="list-style-type: none"> - Edit Scene Title to access the character palette. See <i>Section 3.3 Specifying a Shot or a Sector Title</i>, page 30, for instructions. - Clear Scene to delete the selected scene title. 	
Restore Defaults	Restores the default setting for this menu only.		

2.6

Communication Setup Menu

The **Communication Setup Menu** provides access to baud rate and Bilinx control settings. Menu items marked with an asterisk (*) are the default settings.

Communication Setup	
Exit...	
* AutoBaud:	ON
* Baud Rate	9600
* Bilinx:	ON
Restore Defaults...	
* = Factory Setting	
Focus / Iris: Select	

Communication Setup Menu Choices:

Menu	Description	Sub-menu / Description	Default Setting
Exit	Saves and exits the menu.		
AutoBaud	Turns AutoBaud detection on.	Toggles ON or OFF . ON automatically accepts baud rates from 2400 to 57600. (Note: If stepping from 2400 to 57600 baud, you must first set the controller to 19200 for AutoBaud to detect the higher baud rate.)	ON
Baud Rate	Manually sets the baud rate when AutoBaud is set to OFF.	Choices are 2400, 4800, 9600, 19200, 38400, and 57600. Then follow the OSD to confirm the selection.	9600
Bilinx	Turns on Bilinx control communication. (Only available when not connected to a Bilinx data interface unit.)	Toggles ON or OFF .	ON



NOTICE! Bilinx protocol is not available with IP cameras.

2.7

Alarm I/O Setup

The **Alarm Setup Menu** provides access to the **Alarm I/O Setup Menu** to establish the alarm inputs and outputs and to configure alarm rules.

Menu items marked with the * symbol are available only with VG4 Pressure Domes.

Alarm I/O Setup	Inputs Setup	
Exit...	Exit...	
Inputs Setup...	1. Alarm Input 1 N.C.S.	Physical Input 1-7
Outputs Setup...	2. Alarm Input 2 N.O.S.	
Rule Setup...	3. Alarm Input 3 N.O.	
Restore Defaults...	4. Alarm Input 4 N.C.	
	5. Alarm Input 5 N.O.	
	6. Alarm Input 6 N.C.	
	7. Alarm Input 7 N.O.	
	8. Low Pressure*	
	9. NONE	Physical Output 9-12
	10. NONE	
	11. NONE	
	12. NONE	
Focus / Iris: Select	Focus / Iris: Select Type Right / Left: Select Mode	

Alarm Setup Menu Choices:

Menu	Description	Sub-menu / Description	Default Setting
Exit	Saves and exits the menu.		
Inputs Setup	Defines physical inputs or events and commands that can be used in a rule. There are twelve (12) alarm inputs available.		
Inputs 1-7	Defines the type of physical input.	N.O.: Normally open dry contact. N.C.: Normally closed dry contact. N.C.S.: Normally closed supervised contact. N.O.S.: Normally open supervised contact.	N.O.
Low Pressure	A fixed, physical alarm input that detects a drop in internal pressure for the VG4 Pressure Dome.		
Inputs 8-12	Defines input commands that can be used in a rule. Command inputs can also be customized by using non-assigned keyboard command numbers.	NONE: No command defined. Aux On: Responds to a standard or custom keyboard ON (1-99) command. Aux Off: Responds to a standard or custom keyboard OFF (1-99) command. Shot: Responds to a Preset shot or scene from 1-99. (200 Series 1-64). AutoTrack: Triggers an alarm when set to ON. (Available with 500i Series only). Motion Detection: Triggers an alarm when set to ON . (Available with 500i Series only).	NONE



NOTICE! Alarm inputs 1 and 2 provide tamper detection, if programmed as supervised, for breaks or shorts in an alarm circuit. See the *AutoDome Modular Camera System Installation Manual* for wiring instructions.

Outputs Setup Menu

Outputs Setup...		
Exit...		
1. Alarm Output 1	N.O.	1-4
2. Alarm Output 2	N.O.	Physical
3. Alarm Output 3	N.O.	Outputs
4. Alarm Relay	N.O.	
5. NONE		
6. Aux On	1	5-12
7. Aux Off	8	Command
8. Shot	99	Outputs
9. OSD		
10. Transmit		
11. NONE		
12. NONE		
Focus / Iris: Select Type Right / Left: Select Mode		

Outputs Setup Menu Choices

Menu	Description	Sub-menu / Description	Default Setting
Exit	Saves and exits the menu.		
Outputs Setup	Defines physical outputs and keyboard commands for use in a rule.		
Outputs 1-3	Defines a physical output.	N.O.: Normally open circuit N.C.: Normally closed circuit	N.O.
Alarm Relay	A fixed output available for use in a rule.		
Outputs 5-12	Defines a command output for use in a rule.	Aux On: A keyboard ON command. Aux Off: A keyboard OFF command. Shot: Recalls a preset shot. OSD: An on screen display. Transmit: Transmits a message back to the head end (available with RS-232 serial connections, Bilinx, and IP AutoDome models). AutoTrack: Turns AutoTrack on or off as an output. (Available with 500i Series only). NONE: No command defined.	NONE Outputs 5 and 6 set to OSD and Shot 1

2.8 Rule Setup Menu

The **Rule Setup Menu** shows the status of the rules and lets you add new rules or modify an existing rule. The default setting is **Empty**.

Menu items marked with the * symbol are available only with VG4 Pressure Domes.



NOTICE! You can program a total of twelve rules. You must define the inputs and outputs before you program a rule. See *Section 2.7 Alarm I/O Setup, page 20*, to configure alarm inputs and outputs.

Rule Setup...		Rule 1
Exit...		Exit...
1. Rule 1 Enabled		Enabled YES
2. Rule 2 Disabled		Input:
3. Rule 3 Invalid		Low Pressure*
4. Rule 4 Empty		NONE
5. Rule 5 Empty		NONE
6. Rule 6 Empty		NONE
7. Rule 7 Empty		Output:
8. Rule 8 Empty		OSD
9. Rule 9 Empty		Shot 2
10. Rule 10 Empty		Alarm Relay 2 sec
11. Rule 11 Empty		NONE
12. Rule 12 Empty		
4. Rule 4 Empty		
Focus / Iris: Select		Right / Left: Select Period Time Focus / Iris: Select Type

Rule Setup Menu Choices

Menu	Description	Sub-menu / Description	Default Setting
Exit	Saves and exits the menu.		
Rule 1-12	Displays the status of a rule on the right side of the menu. There are four (4) possible rule statuses.	<p>Enabled: The rule inputs and outputs are properly defined and the rule is turned on.</p> <p>Disabled: The rule inputs and outputs are defined but the rule is turned off.</p> <p>Invalid: The rule has a missing or invalid input or output.</p> <p>Empty: The rule has no inputs or outputs defined.</p>	Empty

Selecting a **Rule** number provides access to its configuration menu. The **Rule # Menu** allows you to configure a rule from previously defined alarm inputs and outputs. Once an alarm is configured with valid inputs and outputs, it can be turned on or off (enabled or disabled) through its configuration menu.

Rule # Choices:

Menu	Description	Sub-menu / Description	Default Setting
Exit	Saves and exits the menu.		
Enabled	Turns the rule on or off after its inputs and outputs have been defined.	YES to enable or NO to disable	NO
Input	Toggles through a list of valid inputs set in the Alarm I/O Setup > Inputs Setup Menu that define the rule's inputs. A rule can have up to four (4) inputs.	Alarm Inputs 1 – 7 and any additional inputs which were set in the Inputs Setup Menu , including Aux On/Off (1-99), Shot, Low Pressure* and NONE.	NONE
Output	Toggles through a list of valid outputs set in the Alarm I/O Setup > Outputs Setup Menu that defines a rule's outputs.	Alarm Outputs 1 – 3 and any additional outputs set in the Outputs Setup Menu including: Alarm Relay, Aux On/Off (1-99), Shot, OSD, Transmit, and NONE. Some outputs, such as Alarm Outputs 1-3, Alarm Relay, and Aux On/Off can be set to be active for a specific duration of time as follows: Seconds: 1-5, 10, 15, or 30 Minutes: 1-5 or 10 Latched: The alarm stays active until acknowledged. Follows: The alarm follows the alarm rule.	NONE



NOTICE! You can include up to four (4) **Input** and **Output** events in a single rule. Each input and output, however, must be true for the alarm's rule to be valid and enabled.

2.9 Language Menu

The **Language Menu** provides access to a list of languages to display the on-screen menus.

Language
Exit...
English
Spanish
French
German
Portuguese
Polish
Italian
Dutch
Focus / Iris: Save and Exit

Language Menu Choices:

Menu	Description	Default Setting
Exit	Saves and exits the menu.	
Choose a language	Select a language in which the system displays the on-screen menus.	

2.10 Advanced Feature Setup Menu (available with Series 500i only)

The **Advanced Menu** provides access to the **Advanced Features Setup** menus such as image Stabilization, AutoTrack Sensitivity and Virtual Masking. Menu items marked with an asterisk (*) are the default settings.

Advanced Feature Setup	
Exit...	
* Stabilization	OFF
* AutoTrack Sensitivity	Auto
AutoTrack Timeout	OFF
AutoTrack Timeout Period	5 min
* Camera Height:	12
Virtual Masking...	
Restore Defaults...	
Focus / Iris: Save and Exit	

Advanced Feature Setup Menu Choices:

Menu	Description	Sub-menu / Description	Default Setting
Exit	Saves and exits the menu.		
Stabilization	Turns on video stabilization.		OFF
AutoTrack Sensitivity	Sets the sensitivity level of AutoTrack.	Sliding scale: -(Auto, 1 to 20)+ Where 1 is more sensitive and 20 is less sensitive. Auto varies the sensitivity level based on various lighting conditions.	Auto
AutoTrack Timeout	Toggles the AutoTrack Timeout feature.	When On , AutoTrack “gives up” after the Timeout Period if tracking in a confined area (for example a tree, a flag, etc).	OFF
AutoTrack Timeout Period	Enters the AutoTrack Timeout Period set menu	Sliding scale 30 sec, 1 to 30 min.	5 min
Camera Height	Defines the height of the camera for AutoTrack.	A range from 2.4 m (8 ft) to 30.7 m (100 ft)	3.6 m (12 ft)
Virtual Masking	Enters the Virtual Mask menu. See <i>Section 7.3 Virtual Masking (500i Series Only)</i> , page 52.	Allows up to 24 virtual masks using five anchor points.	
Restore Defaults	Restores the default settings for this menu.		

2.11 Diagnostics Menu

The Diagnostics menu provides access to a list of diagnostic tools and events.

Diagnostics	
Exit...	
Alarm Status...	
BIST...	
Internal Temp:	Deg F / Deg C
High Temp Events:	Deg F / Deg C
Highest Temp	Deg F / Deg C
Low Temp Events:	Deg F / Deg C
Lowest Temp:	Deg F / Deg C
Security Access:	0
CTFID Access:	0
Homing Events:	0
Homing Failed:	0
Loss Home Events	0
Home Position Good	YES
Restart Events:	
Low Volt Events:	0
Power Up Events:	0
Video Loss Events:	0
ExtComm Error Events	0
Total Time On	0hr 0min
Focus / Iris: Save and Exit	

Dagnostic Events

Menu	Description	Sub-menu / Description
Exit	Saves and exits the menu.	
Alarm Status	Enters the Alarm Status menu and displays the real time status of alarm inputs and outputs.	Alarm Inputs 1 to 7, Alarm Outputs 1 to 3, Pressue* and Alarm Relay
BIST	Enters the Perform Built-in Self Tests menu. If confirmed, the BIST tests start and the results are displayed.	YES to start test. NO to exit the menu. Typical results displayed as follows: BIST Exit... Data Flash: PASS Bilinx: PASS FPGA: PASS Digital I/O 1: PASS Digital I/O2: PASS VCA: PASS Homing: PASS
Internal Temp.	Displays the current dome temperature.	

Menu	Description	Sub-menu / Description
High Temp Events	Displays the number of times the high temperature threshold is exceeded.	
Highest Temp	Displays the highest temperature reached.	
Low Temp Events	Displays the number of times the low temperature threshold is exceeded.	
Lowest Temp	Displays the lowest temperature reached.	
Security Access	Displays the number of times the locked-command menu is unlocked.	
CTFID Access	Displays the number of times the Configuration Tool is accessed.	
Homing Events	Displays the number of times the AutoDome was rebooted.	
Homing Failed	Displays the number of times the AutoDome failed to home properly.	
Loss Home Events:	Displays the number of times the AutoDome lost the home position.	
Home Position Good	Displays if the current AutoDome home position is good. Displays YES if good.	
Restart Events	Displays the number of restart events.	
Low Volt Events	Displays the number of times the AutoDome dropped below the acceptable voltage limit.	
Power Up Events	Displays the number of power up events.	
Video Loss Events	Displays the number of time that video was lost.	
ExtComm Error Events: (IP comm modules only.)	Displays the number of times that the IP communications module lost internal communication with the System Controller.	

2.11.1

Alarm Status Submenu

This menu displays the status of the alarm inputs, alarm outputs and the pressure alarm. Menu items marked with the * symbol are available only with VG4 Pressure Domes.

Alarm Status	
Exit...	
Alarm Input 1	High
Alarm Input 2	High
Alarm Input 3	Open
Alarm Input 4	Open
Alarm Input 5	Open
Alarm Input 6	Open
Alarm Input 7	Open
Pressure*	OK
Alarm Output 1	Open
Focus / Iris: Save and Exit	

Menu	Description	Options
Exit	Saves and exits the menu.	
Alarm Input 1...7	Displays the status of alarm inputs 1 through 7.	High Low Open (Normally Open) Closed (Normally Closed)
Pressure	Displays the status of the Pressure alarm	OK: The internal pressure inside the AutoDome is at or above the recommended level. Low: The internal pressure inside the AutoDome is below the recommended level. Refer to the <i>AutoDome Modular Camera System Installation Manual</i> for instructions on recharging the pressure.
Alarm Output	Displays the status of the alarm output.	

VG4 Pressure Dome Alarm

The OSD displays a blinking low pressure alarm (***) LOW PRESSURE (***) when the internal pressure of a VG4 Pressure Dome falls below the recommended level. Press **OFF-65-ENTER** on the keyboard to acknowledge the alarm. The AutoDome, then, replaces the blinking alarm message with a static “LP.” The “LP” remains on the OSD until the internal pressure of the AutoDome is raised above the recommended level.

3 Common AutoDome User Commands (unlocked)

This chapter details the commonly used Bosch keyboard setup commands. See Section 6 Keyboard Commands by Number, Page 44, for a complete list of commands.

3.1 Setting AutoPan Mode

AutoPan mode pans the AutoDome camera 360° or pans between user defined limits (when programmed). The AutoDome camera continues to pan until stopped by moving the joystick.

To pan 360°:

1. Press **ON-1-ENTER**.
2. Move the joystick to stop the pan.

To set left and right pan limits:

1. Move the camera to the starting position and press **SET-101-ENTER** to set the left limit.
2. Move the camera to the end position and press **SET-102-ENTER** to set the right limit.

To start AutoPan between limits:

1. Press **ON-2-ENTER**.
2. Move the joystick to stop the pan.

3.2 Setting Preset Shots

Preset shots are saved camera positions. Shots are saved as scenes, therefore, the terms **SHOT** and **SCENE** are used interchangeably.

To set a Shot:

1. Move the camera to the position you want to save.
2. Press **SHOT-#-ENTER** where # can be a number from 1 to 99 that identifies the camera position of the scene. (shots 1-64 for a 200 Series AutoDome.)
3. To specify a title for the shot, see the procedure below.

To view a Shot:

- ▶ Press **SHOT-#-ENTER** where # is the number of the scene position you want to view.

To store or clear a Shot:

1. Press **SET-100-ENTER** to access the **Store/Clear Scene Menu**.
2. Follow the on-screen instructions.

3.3 Specifying a Shot or a Sector Title

The AutoDome provides an alphanumeric character palette used to specify a title for a shot (scene) or for a sector (zone).

1. To specify a title:
 - for a shot: set a new shot or view a stored shot then press **ON-62-ENTER**.
 - for a scene: move the AutoDome to the scene (zone) then press **ON-63-ENTER**.
2. Use the joystick to move the cursor to highlight a character.
3. Press Focus/Iris to select the character.
4. Continue to select characters (up to 16) until you have created the title.
5. To clear a character from the title:
 - a. Use the joystick to highlight the **Clear OR Position Character** prompt.
 - b. Move the joystick left or right until the cursor is below the title character you need to clear.
 - c. Press Focus/Iris to clear the character.
 - d. Move the joystick up to bring the cursor back into the character palette.
6. To save the title:
 - a. Use the joystick to highlight the Exit prompt.
 - b. Press Focus/Iris to save the title.

3.4 Configuring Preposition Tours

A **Preposition Tour** automatically moves the camera through a series of preset or saved shots. The 200 Series has one (1) standard preset tour available, while the 300 and the 500i Series have two (2) standard preset tours and two (2) customized preset tours. Tour 1 is a standard tour that moves the camera through a series of shots in the sequence they were set. **Tour 2** is a custom tour that allows you to change the sequence of shots in the tour by inserting and deleting scenes.

To start Preposition Tour 1: (200, 300, and 500i Series)

1. Set a series of preset shots in the order that you want the AutoDome to cycle through.
2. Press **ON-8-ENTER** to start the tour. The tour then cycles through the series of shots until it is stopped.

To stop a Preposition Tour:

- ▶ Press **OFF-8-ENTER** or move the joystick to stop either type of tour.

To add or remove scenes to Preposition Tour 1:

1. Press **SHOT-900-ENTER** to access the **Add/Remove Scenes Menu**.
2. Use the **Focus/Iris** buttons to add or remove the selected scene from the tour.

To start custom Preposition Tour 2: (300 and 500i Series Only)

- ▶ Press **ON-7-ENTER** to start a tour. The tour cycles through the series of shots in the order they were defined until it is stopped.

To edit a custom Preposition Tour 2:

1. Press **SET-900-ENTER** to access the **Add/Remove Menu**.
2. Press the **Focus/Iris** buttons to add or remove the selected scene.

To change the dwell period of a tour:

1. Press **ON-15-ENTER** to access the **Tour Period Menu**.
2. Select the tour (**Tour 1** or **Tour 2**) and follow the on-screen instructions.

3.5 Programming the Inactivity Operation

You can program the AutoDome to automatically change its operating mode after a period of inactivity.

To access the Inactivity mode (locked command):

1. Press **OFF-90-ENTER** to turn off the command lock.
2. Press **ON-9-ENTER** to access the **Inactivity Mode Menu**.
3. Select one of the following choices:
 - **Return to Scene 1**: Returns the camera position back to the first scene saved in memory.
 - **Recall Previous Aux**: Returns the camera to the previous operating mode, such as a **Preposition Tour**.

3.6 Recording Tours (300 and 500i Series only)

The 300 and 500i Series AutoDome can make up to two (2) recorded tours. A **Recorded Tour** saves all manual camera movements made during the recording, including its rate of pan, tilt and zoom speeds and other lens setting changes.

To Record Tour A:

1. Press **ON-100-ENTER** to start recording a tour.
2. Press **OFF-100-ENTER** to stop recording.

To playback Recorded Tour A:

1. Press **ON-50-ENTER** to begin continuous playback.
2. Press **OFF-50-ENTER** or move the joystick to stop playback

To Record Tour B:

1. Press **ON-101-ENTER** to start recording the tour.
2. Press **OFF-101-ENTER** to stop the tour.

To playback Recorded Tour B:

1. Press **ON-52-ENTER** to begin continuous playback.
2. Press **OFF-52-ENTER** or move the joystick to stop playback.

4 Alternative Control Protocols

The VG4 AutoDome supports three alternative control protocols that allows a user to send commands and to receive information from the AutoDome. The VG4 AutoDome supports the following protocols:

- Pelco-P
- Pelco-D
- American Dynamics (AD) Manchester
- American Dynamics (AD) Sensormatic RS-422

The VG4 AutoDome natively supports the two Pelco protocols. To use the AD Manchester or the AD Sensormatic RS-422 protocol you must purchase a separate module. The module contains instructions to install any additional hardware and information about additional on-screen menus.

4.1 Setting FastAddress with Alternative Protocols

The VG4 AutoDome offers remote addressing via the FastAddress capability from a keyboard that uses an alternative protocol. The FastAddress feature allows you to instal all domes first, then set the addresses via the control system. Since it is not necessary to go to the camera's physical location, this feature makes it easier to readdress cameras at a later time.

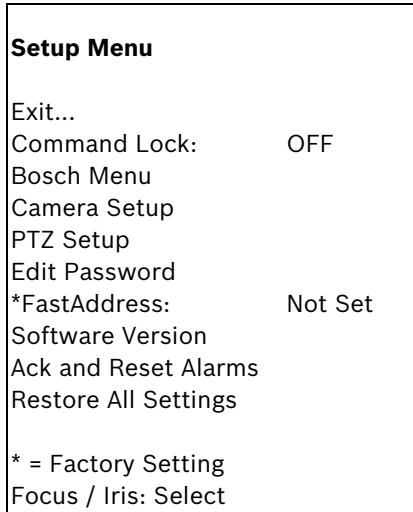
4.1.1 Using an American Dynamics Controller

Prior to setting the FastAddress for each camera, all cameras will initially move together. After the Unique Identifier is set, only the camera that was set with the FastAddress is capable of sending and receiving commands. When setting the FastAddress, it is important to remember that some American Dynamics Manchester systems use address blocks of 1 to 64, while American Dynamics Sensormatic systems typically use address blocks of 1 to 99; meaning that when the controller/keyboard displays video for cameras higher than 64 or 99 the keyboard/controller sends a different control code to the camera (see *Section A Appendix: FastAddress Conversions, page 127*, for conversion charts). For example at Camera 65, the American Dynamics Manchester system sends out an address of 1, while the Sensormatic RS-422 system with an address of 100 also sends out an address of 1.

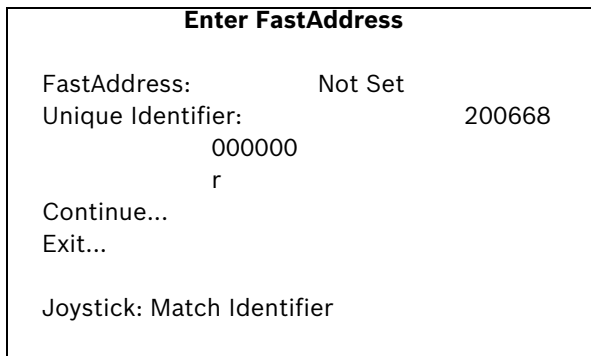
It is NOT NECESSARY to convert these numbers with the Bosch FastAddress method. The camera automatically detects the address being transmitted by the Sensormatic RS-422 control system and adjusts the camera accordingly.

Setting the FastAddress with an AD Manchester or AD Sensormatic RS-422 Keyboard

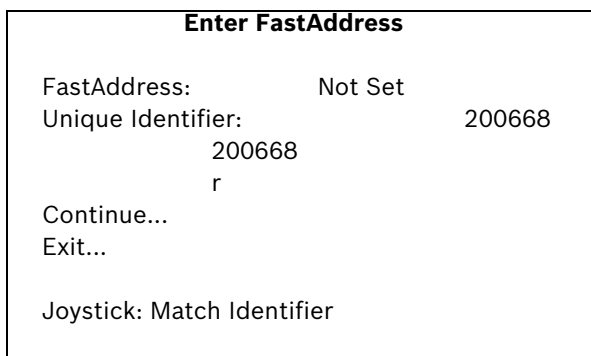
1. Enter the AutoDome Setup menu using **66-Preset/Shot** on most AD/Sensormatic RS-422 keyboards. Note: Based on your keyboard model, it may be necessary to enter the PROGRAMMING mode prior to entering this command.
2. Move the joystick to highlight the **Command Lock** menu. Note: The first time the VG4 is set-up out of the box, the Command Lock feature is set to OFF for the first two (2) minutes of operation and then reverts to the ON setting.



3. Press the **FOCUS** or the **IRIS** button to turn Command Lock to OFF. Move to the **FastAddress** menu and press the **FOCUS** or the **IRIS** button to open the menu. Use the joystick to re-enter the 6-digit factory-set Unique Identifier displayed for the VG4 AutoDome. See example as follows:



- Move the joystick up or down to select the individual number. Move the joystick right to move to the next FastAddress number position. When completed, the FastAddress number entered must match the Unique Identifier displayed. See example as follows:





NOTICE! If the user does not enter the exact manufacturer Unique Identifier as displayed on-screen, the FastAddress can not be set and the only option available is to Exit the menu.

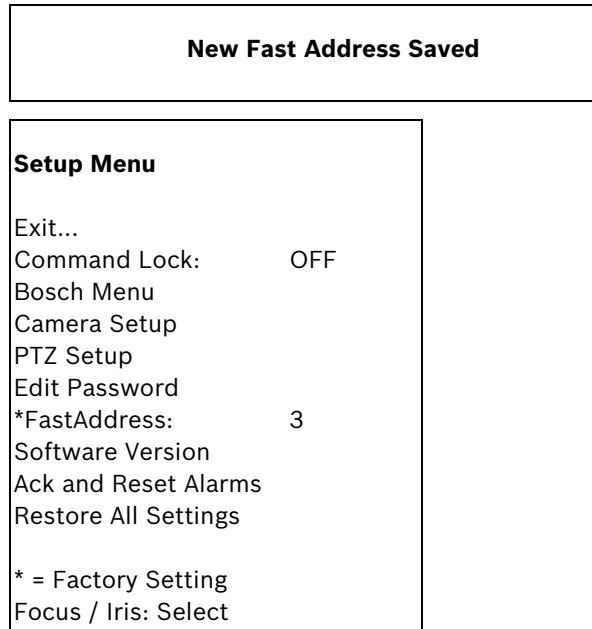
4. Move the joystick right to highlight **Continue**. Then, press the **FOCUS** or the **IRIS** button.

Enter FastAddress	
FastAddress:	Not Set
Unique Identifier:	200668
	200668
	r
Continue...	
Exit...	
Joystick: Match Identifier	

5. The AutoDome automatically reads the correct Address sent by the controller and is displayed as **Save ## as FastAddress** (## is based on either 1-64 AD/Manchester or 1-99 AD/Sensormatic RS-422). It is NOT POSSIBLE to change the address that is displayed. The following options are available:
- Press the **FOCUS** or the **IRIS** button to store the FastAddress number.
 - Move the joystick to highlight **Clear Current FastAddress** and then press the **FOCUS** or the **IRIS** button to clear any currently saved Fast Address.
 - Move the joystick to highlight **Exit Without Change** to exit the FastAddress menu without saving any changes.

FastAddress	
FastAddress:	Not Set
Save “##” as FastAddress	
Clear Current FastAddress	
Exit Without Change	
Focus/Iris: Select	

6. The on-screen display menu confirms that the VG4 AutoDome stored the FastAddress and then returns to the Main menu with the new Fast Address displayed. Move the joystick to highlight **EXIT**, and then press **FOCUS** or **IRIS** to exit the menus.



4.1.2

Using a Pelco Controller

This section provides instructions to set a FastAddress with a Pelco keyboard or controller.

- An AutoDome with an address set to 0 responds to commands set to any address.
- **Pelco-P** protocol must use addresses 1 to 32.
- **Pelco-D** protocol must use addresses 1 to 254.



NOTICE! A previously configured AutoDome with an address above 32 (Pelco-P upper limit) or 254 (Pelco-D upper limit) can be used without readdressing the unit. However, no two (2) addresses can be the same. For example:

Pelco-P addresses above 32 are repeated in multiples of 32 (1, 33, 65, 97 are the same).
 Pelco-D addresses above 254 are repeated in multiples of 254 (1, 255, 509, 763 are the same).

Setting FastAddress with a Pelco Keyboard

1. Press and hold **95-PRESET** for two seconds to open the Pelco Setup menu.
2. Move the joystick to select the **Command Lock** menu.
3. Press the **FOCUS** or the **IRIS** button to turn Command Lock to **OFF**.
4. Move to the **FastAddress** menu and press the **FOCUS** or the **IRIS** button to open the menu.
5. Use the joystick to enter the unique identifier for the VG4 AutoDome.
 - Move the joystick up or down to select the number.
 - Move the joystick right to move to the next number position.
6. Move the joystick right to select Continue. Then, press the **FOCUS** or the **IRIS** button.
7. Use the keyboard to enter the **FastAddress** number. Then, press the **Camera** button.

Note: You must first clear an assigned FastAddress number to use the number for a different VG4 AutoDome.
8. Move the joystick down then back up to set the **FastAddress** number.
9. Press the **FOCUS** or the **IRIS** button to store the **FastAddress** number.

The on-screen display menu confirms that the VG4 AutoDome stored the FastAddress number.

4.2 Pelco Protocol Mode

The Pelco Mode features Auto Baud Detection that automatically detects and adjusts the AutoDome protocol and baud rate to match that of the controller. The AutoDome responds to Pelco-D or Pelco-P protocol commands.



NOTICE! The AutoDome supports only the RS-485 protocol while in Pelco mode. It does not transmit responses back to the controller.

4.2.1 Hardware Configuration

The AutoDome is configured from the factory for RS-485 operation in **Pelco Protocol Mode**.

1. Connect the controller's TX terminals to the AutoDome's TxD terminals. See the *AutoDome Modular Camera System Installation Manual* for complete wiring instructions.
2. Pan or tilt the keyboard joystick to confirm that control has been established to the AutoDome (approximately five (5) seconds).



NOTICE! If control is not established, ensure that the RS-232/RS-485 selector switch is positioned to RS-485 (outward toward the LED lights). This switch is located on the bottom of the AutoDome CPU board, under the camera head and next to the LED lights. See Figure 4.1.

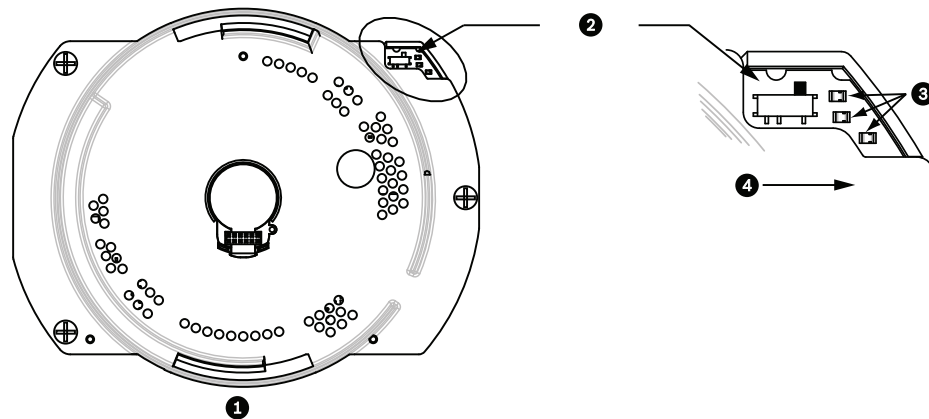


Figure 4.1 RS-232/RS-485 Selection Switch

1	CPU Module
2	Switch Location
3	LEDs
4	RS485

4.2.2 Pelco Keyboard Commands

Pelco control commands are composed of a sequence of two (2) keyboard inputs with the following convention: 1) a **Command Number** and 2) a **Function** key input.

The AutoDome uses the **PRESET** command key to save and recall presets (pre-positions) 1 through 99.



NOTICE! To save a preset, enter the desired number and hold the **PRESET** key for approximately two (2) seconds. To recall a preset, enter the desired preset number (or command) and momentarily press and release the **PRESET** key.

4.2.3 Pelco Keyboard Commands

Keyboard Command	User Action	Description
0-Pattern	Press	Initiates recording continuous playback based upon current Recording setting (A or B) in the Setup Menu.
	Press and hold	Initiates recording based upon current Recording setting (A or B) in the Setup Menu. Press ACK to end recording.
1-Pattern	Press	Initiate Recording A continuous playback.
	Press and hold	Initiate Recording A. Press ACK to end recording.
2-Pattern	Press	Initiate Recording B continuous playback.
	Press and hold	Initiate Recording B. Press ACK to end recording.
3-Pattern	Press	Initiate the AutoDome standard preset tour (Tour 1).
4-Pattern	Press	Initiate the AutoDome custom preset tour (Tour 2).
1 – Aux On / Aux Off	Press	Activates / deactivates alarm output 1.
2 – Aux On / Aux Off	Press	Activates / deactivates alarm output 2.
3 – Aux On / Aux Off	Press	Activates / deactivates alarm output 3.
4 – Aux On / Aux Off	Press	Activates / deactivates alarm relay.
91 – Aux On	Press	Activate Zone Scan (display zone titles).
92 – Aux On	Press	Deactivate Zone Scan (re-move zone titles)

4.2.4 Special Preset Commands

Some **Pelco** mode preset commands have a special meaning and override the normal Pelco preset function as follows:

Preset Command	Description
33-PRESET	Pans the AutoDome 180° (Flip).
34-PRESET	Goes to Zero Pan (original home position).
80-PRESET	Toggles the Synchronization Mode between Line Lock and Internal (Pelco Frame Scan). This command is available if commands are unlocked using the Main menu.
81-PRESET	Initiates Preset Tour 1 .
82-PRESET	Initiates Preset Tour 2 .
92-PRESET	Sets the Left pan limit for an AutoScan with Limit Stops enabled.
93-PRESET	Sets the Right pan limit for an AutoScan with Limit Stops enabled.
94-PRESET	Initiates a Preset Tour .
95-PRESET	Enables or disables Limit Stops in the Setup Menu for AutoScan. Invokes the Pelco main Setup Menu when pressed for 2 seconds.
96-PRESET	Stops a scan.
97-PRESET	Initiates FastAddress (Pelco Random Scan).
98-PRESET	Toggles the Synch. Mode between Line Lock and Internal (Pelco Frame Scan). This command is available only for two (2) minutes after the power is applied and then reverts to normal preset functionality.
99-PRESET	Starts an AutoScan



NOTICE! Some Pelco controllers do not support all the preset command numbers. Consult the specific Pelco controller's documentation for supported preset commands.

5 Pelco On-Screen Menus

You can program the AutoDome through the Pelco on-screen display (OSD) menus. To access the Pelco menus, you must configure the AutoDome for **Pelco Mode** and invoke the Pelco main **Setup Menu**.

5.1 Setup Menu

The Pelco main **Setup Menu** provides access to the programmable AutoDome settings. Some menu items are locked and require a system password to use. Menu items marked with an * are the default settings.

To open the Pelco main Setup Menu (locked commands):

1. Press **95-PRESET** (press the **PRESET** button for approximately 2 seconds to open).
2. Use the joystick to highlight a menu item.
3. Press either the **Focus** or the **Iris** key to open a menu item.
4. Follow the on-screen instructions at the bottom of the screen.

Setup Menu	
Exit...	
Command Lock:	OFF
Bosch Menu	
Camera Setup	
PTZ Setup	
Edit Password	
*FastAddress:	Not Set
Advanced	
Software Version	
Ack and Reset Alarms	
Restore All Settings	
Reset All Memory	
* = Factory Setting	
Focus / Iris: Select	



NOTICE! Use Zoom to select the **Exit** item from anywhere in a menu.

Menu	Description
Exit	Exits the menu.
Command Lock (locked)	Allows or prohibits accessing locked commands. (If password is set, you are prompted to enter the password.)
Bosch Menu (locked)	Accesses the full AutoDome configuration menu and all AutoDome settings.
Camera Setup	Accesses the White Balance and Night Mode camera settings.
PTZ Setup	Accesses the tours, tour periods, scan speed, edit presets, limit stops, recording, and AutoPivot settings.
Edit Password (locked)	Changes the password.
FastAddress (locked)	Sets or changes a camera address.

Menu	Description
Exit	Exits the menu.
Software Version	Displays the current software versions.
Ack and Reset Alarms	Acknowledges and resets active alarms.
Restore All Settings (locked)	Restores all settings to their original default setting.
Reset All Memory (locked)	Clears all settings, including scene shots, tours, and recordings stored in the AutoDome memory.



NOTICE! After a period of 4.5 minutes of inactivity, the OSD menu times-out and exits without warning. Some unsaved settings can be lost!

5.1.1 Command Lock (locked)

The Pelco **Command Lock Menu** allows or prohibits the use of locked commands. The default setting is **ON**.



NOTICE! If the Command Lock is set to **ON** and you press **Focus** or **Iris** on a locked command, the AutoDome displays the on-screen message: "Command is Locked."

5.1.2 Bosch Menu (locked)

The **Bosch Menu** allows full access to the AutoDome main **Setup Menu** and all AutoDome configuration settings.

Pelco menu		Bosch menu	
Setup Menu		Setup Menu	
Exit...		Exit...	
Command Lock:	OFF	Camera Setup	
Bosch Menu		Lens Setup	
Camera Setup		PTZ Setup	
PTZ Setup		Display Setup	
Edit Password		Communication Setup	
*FastAddress:	Not Set	Alarm Setup	
Advanced		Language	
Software Version		Advanced	
Ack and Reset Alarms		Diagnostics	
Restore All Settings			
Reset All Memory			
* = Factory Setting			
Focus / Iris: Select		Focus / Iris: Select	

Refer to *Section 2: On-Screen Display Menu Navigation* for a complete description of Bosch menus and configuration settings.

Camera Setup (unlocked)

The Pelco **Camera Setup Menu** provides access to camera settings.

Camera Setup
Exit... * White Bal: OUTDOOR * Night Mode: AUTO * = Factory Setting Focus / Iris: Select

Camera Setup Menu Choices:

Menu	Description	Sub-menu / Description	Default Setting
Exit	Exits the menu.		
White Balance	Sets a default value in case the Pelco controller disables the white balance.	OUTDOOR: Sets a default setting if the controller disables white balance. INDOOR: Sets a default setting if the controller disables white balance.	OUTDOOR
Night Mode	Switches from color to monochrome.	ON: Sets Night Mode on. OFF: Sets Night Mode off. AUTO: Sets Night Mode to Auto set.	ON (Day/Night models only)

5.1.3

PTZ Setup (unlocked)

The Pelco **PTZ Setup Menu** provides access to the PTZ settings such as tours, scan speed, presets, limit stops, recording, and AutoPivot.

PTZ Setup
Exit... * Edit Tour 1... * Edit Tour 2... * Tour 1 Period: 5 sec * Tour 2 Period: 5 sec * Scan Speed 30 deg/sec Edit Presets... * Limit Stops: OFF * Recording: "A" * Autopivot: ON * = Factory Setting Focus / Iris: Select

PTZ Setup Menu Choices:

Menu	Description	Sub-menu / Description	Default Setting
Exit	Exits the menu.		
Edit Tour 1 (300 and 500i Series)	Accesses the Add / Remove Scenes On Standard Tour 1 Menu .	Exit: Exits the menu. Scene (1 - 5): Adds or removes scenes from the Standard Tour .	
Edit Tour 2 (300 and 500i Series)	Accesses the Edit Custom Tour Menu .	Exit: Exits the menu. Scene (1 - 5): Adds or removes scenes from the Custom Tour .	
Tour 1 Period	Changes the length of waiting time between presets.	Sliding scale: – (3 sec. to 10 min.) +	5 sec.
Tour 2 Period	Changes the length of waiting time between presets.	Sliding scale: – (3 sec. to 10 min.) +	5 sec.
Scan Speed	Changes the AutoPan and AutoScan speeds.	Sliding scale: – (1°/sec to 60°/sec) +	30°/sec.
Edit Presets	Modifies preset scenes.	1-99 scenes	
Limit Stops	Toggles the Limit Stops for AutoScan.	ON or OFF	OFF
Recordings (300 and 500i Series)	Selects record Pattern 1 or 2, if normal pattern command does not respond.	“A” or “B”	“A”
AutoPivot	Follows a subject while beneath the camera, without inverting the picture.	ON or OFF	ON

5.1.4**Other Menus**

Menu	Description	Default Setting
Edit Password (locked, 300 and 500i Series)	Sets or displays the password. See <i>Section 1.4 Setting Passwords, page 10</i> .	
FastAddress (locked)	Sets or changes the AutoDome address.	Not Set
Software Version (unlocked)	Displays the camera software version.	
Ack and Reset Alarms (unlocked, 300 and 500i series)	Acknowledges and resets alarms. If there is no active alarm input, the OSD displays the following message: “No Active Alarms.”	
Restore All Settings (locked)	Restores all settings to their original factory default settings.	
Reset All Memory (locked)	Restores all settings to their original factory default settings and clears all user programmed settings such as preset scenes and recordings.	

6 Keyboard Commands by Number

Locked	Function Key	Comm No.	Command	Description	Series 200	Series 300	Series 500i
	On/Off	1	Scan 360°	Autopan without limits	*	*	*
	On/Off	2	Autopan	Autopan between limits	*	*	*
*	On/Off	3	Iris Control	Enters menu (auto, manual)	*	*	*
*	On/Off	4	Focus Control	Enters menu (spot, auto, manual)	*	*	*
	On/Off	7	Play Custom Pre-position Tour	Activate/Deactivate		*	*
	On/Off	8	Play Pre-position Tour	Activate/Deactivate	*	*	*
*	On/Off	9	Inactivity Mode	Enters menu (Off, Return to Scene 1, Recall Previous PTZ Command)	*	*	*
*	On/Off	11	Auto Iris Level adjust	Enters Iris Level Adjustment menu	*	*	*
	On/Off	14	Set Autopan and Scan Speed	Enters speed adjustment slide bar	*	*	*
	On/Off	15	Set Pre-position Tour Period (dwell)	Enters dwell adjustment slide bar	*	*	*
*	On/Off	18	AutoPivot Enable	Enables/disables AutoPivot	*	*	*
	On/Off	20	Backlight Comp	Backlight Compensation	*	*	*
*	On/Off	23	Electronic Shutter	Enters Shutter Speed slide bar	*	*	*
	On/Off	24	Stabilization	Electronic Stabilization			*
	On/Off	26	Wide Dynamic Range (WDR camera only)	Activate/Deactivate		*	*
*	On/Off	35	White Balance Mode	Enters White Balance menu	*	*	*
*	On	40	Restore Camera Settings	Restores all setting to their original defaults	*	*	*
*	On/Off	41	Line Lock Phase Adjust	Enters delay adjustment slide bar	*	*	*
*	On/Off	42	Sync Mode	On–Line Lock Off–Internal	*	*	*
*	On/Off	43	Auto Gain Control	AGC–On, Auto, Off	*	*	*
*	On/Off	44	Sharpness	Enters Sharpness menu	*	*	*
*	On	46	Advanced menu	Enters Main Setup menu	*	*	*
	On	47	View Factory Settings	View all menu default settings	*	*	*
	On/Off	50	Playback A, continuous	Activate/Deactivate		*	*
	On/Off	51	Playback A, single	Activate/Deactivate		*	*
	On/Off	52	Playback B, continuous	Activate/Deactivate		*	*
	On/Off	53	Playback B, single	Activate/Deactivate		*	*
	On/Off	56	Night Mode menu	On, Off, Auto (Day/Night only)	*	*	*
	On/Off	57	Night Mode setting	Enables/disables Night Mode (Day/Night only)	*	*	*

Locked	Function Key	Comm No.	Command	Description	Series 200	Series 300	Series 500i
*	On/Off	58	Day/Night Threshold	On–menu (Day/Night only)	*	*	*
	On/Off	59	Night Mode Priority	Motion–Activates Night Mode before slow shutter, preserving full-frame integration as light is reduced. Color–Activates slow shutter before Night Mode, preserving color longer as light is reduced.			
*	On/Off	60	On Screen Display	On–enable Off–disable	*	*	*
*	On	61	Display Adjust	Adjust On-screen Display	*	*	*
	On	62	Pre-position Title menu	Enters Pre-position Title menu. Refer to <i>Section 3.3 Specifying a Shot or a Sector Title, page 30.</i>	*	*	*
*	On	63	Zone Title menu	Enters Zone Title menu. Refer to <i>Section 3.3 Specifying a Shot or a Sector Title, page 30.</i>	*	*	*
	On	64	Alarm Status	Enters Alarm Status menu		*	*
	Off	65	Alarm Acknowledge	Acknowledge alarm or deactivate physical outputs		*	*
	On	66	Display software version	Displays software version number	*	*	*
*	On/Off	69	Alarm rule activation/ deactivation	On–Enables all alarm rules Off–Disables all alarm rules		*	*
	On	72	Re-initialize camera	Performs camera/lens re-initialization functions	*	*	*
	On/Off	78	AutoTrack	Turns AutoTrack on or off			*
*	On	79	Camera Height	Enters the Camera Height menu			*
*	On/Off	80	Digital Zoom Lock	Turns digital zoom on and off		*	*
	On/Off	81	Alarm Output 1 Open Collector	On–activates output Off–deactivates output		*	*
	On/Off	82	Alarm Output 2 Open Collector	On–activates output Off–deactivates output		*	*
	On/Off	83	Alarm Output 3] Open Collector	On–activates output Off–deactivates output		*	*
	On/Off	84	Alarm Output 4 Relay	On–activates output Off–deactivates output		*	*
*	On/Off	86	Sector Blanking	Enters Sector Blanking menu		*	*
*	On/Off	87	Privacy Masking	Enters Privacy Masking menu		*	*
	On/Off	90	Command Lock/Unlock	On–lock on Off–lock off	*	*	*
*	On/Off	91	Lens Polarity menu	On–reverse Off–normal	*	*	*

Locked	Function Key	Comm No.	Command	Description	Series 200	Series 300	Series 500i
*	On/Off	92	Lens Polarity menu	On–reverse Off–normal	*	*	*
*	On/Off	93	Lens Polarity menu	On–reverse Off–normal	*	*	*
	On/Off	100	Record A	Activate/Deactivate		*	*
	On/Off	101	Record B	Activate/Deactivate		*	*
	On	997	FastAddress, display	Display current address	*	*	*
	On	998	FastAddress, all units	Display and program current address	*	*	*
	On	999	FastAddress, unaddressed domes	Display and program unaddressed AutoDomes	*	*	*
	Set	“1-99”	Pre-position programming	Set ##–programs a preset view	“1-64”	*	*
	Shot	“1-99”	Pre-position recall	Shot ##–recall programmed preset	“1-64”	*	*
	Set	100	Pre-position menu	Enters the Pre-position menu	*	*	*
	Set/ Shot	101	Autopan left limit	Set–programs left limit Shot–shows limit	*	*	*
	Set/ Shot	102	Autopan right limit	Set–programs right limit Shot–shows limit	*	*	*
	Set	110	Factory P/T home position	Set–recalibrate home position	*	*	*
*	Set	802	Edit Password	Enters the Edit Password menu		*	*
*	Set	899	Reset ALL	Restores all settings to original defaults and clears all user-programmed settings	*	*	*
	Set	900	Edit Tour 1 (Standard)	Enters the Standard Tour Scene menu		*	*
	Shot	900	Edit Tour 2 (Custom)	Enters the Custom Tour Scene menu		*	*
	Set/ Shot	901-999	Adds/Removes a preposition shot from Tour 1	Set ###–adds preset Shot ###–removes preset	901-964	*	*

7 Advanced Features

This chapter details the advanced features of the AutoDome Modular Camera System.

7.1 Alarm Rules (300 and 500i Series Only)

The 300 and 500i Series AutoDomes feature a powerful alarm rule engine. In its simplest form, an alarm rule defines those inputs that activate specific outputs. In its more complex form, a rule can be programmed to take any combination of inputs and keyboard commands to perform a dome function. There are numerous combinations of alarm inputs and outputs that can be programmed into twelve alarm rules.

7.1.1 Controlling Alarm Rules

The AUX 69 command allows a user to enable or disable all alarm rules. By default, alarm rules are enabled until the OFF-69-ENTER command is issued from a keyboard (there is no corresponding menu item for this command). Disabling alarms rules does not erase the rule, the AutoDome preserves the user-defined settings and the rule data is restored when the ON-69-ENTER command is issued.

The OFF-69-ENTER command performs the following actions:

- Disables all alarm rules
- Displays the message “Ack and Reset Alarms” if an alarm-rule triggered alarm is active when the AutoDome receives the disable command. You must acknowledge the alarm before the rule is disabled.
- Prevents the modification of an alarm rule while disabled.

7.1.2 Alarm Rule Examples

Following are three examples for setting up alarm rules. The first example is a basic alarm rule, and the second and third examples are more complex.

Example 1: Basic Alarm Rule

Scenario: We want a door alarm contact to:

1. Flash an OSD message (**ALARM 1**) on the display when the alarm is triggered.
2. Move the AutoDome camera to a saved position. (For this example Shot 7.)
3. Transmit a Bilinx signal over the coax cable to the headend system, such as an Allegiant, to trigger an alarm response.

The sequence to program the above alarm rule example is as follows:

1. Wire the door contact to Input 1 in the AutoDome. This circuit is normally open.
2. Define the Alarm Input(s)
 - From the Inputs Setup menu, ensure that Alarm Input 1 is set to **N.O.** (This is the default setting for Input 1.)



NOTICE! For instruction on wiring alarm and relay connections, see the *AutoDome Modular Camera System Installation Manual*.

3. Define the Alarm Outputs from the Outputs Setup menu:
 - a. Ensure Output 5 is set to **OSD**. (This is the default setting for Output 5.)
 - b. Set Output 6 to **Shot 7**.
 - c. Set Output 7 to **Transmit** (a Bilinx signal to the head end).
4. Set up the Alarm Rule (for this example use Rule 1). Select the Inputs from the Rule Setup menu:
 - a. Select **Rule 1**.
 - b. Set the first input to **Alarm Input 1**.
5. Select the outputs:
 - a. Set the first output to **OSD**.
 - b. Set the second output to **Shot 7**.
 - c. Set the third output to **Transmit**.
6. Enable the rule:
 - Highlight Enabled and select **YES**.

Example 2: Advanced Alarm Rule

Scenario: A 500i Series AutoDome located at an airport is set to AutoPan Between Limits from the parking garage to the airport terminal. The gate entering the airport has an alarm contact connected to the AutoDome, and the perimeter fence in the area of the gate has an infrared (IR) motion detection sensor connected to the AutoDome.

When both the gate contact and motion detector alarms are activated at the same time, we want the alarm rule to:

1. Flash an OSD message (**ALARM 2**) on the monitor.
2. Stop the AutoPan and move the camera to a saved position (Shot 5) viewing the fence.
3. Turn on AutoTrack.
4. Transmit a Bilinx signal to the head end system to trigger an alarm response.

The sequence to program this alarm rule example is as follows:

1. Wire and set the alarm Input(s).
 - a. Wire the motion detector to Input 1. (This circuit is normally open.)
 - b. Wire the gate alarm contact to Input 5. (This circuit is normally closed.)



NOTICE! For instruction on wiring alarm and relay connections, see the *AutoDome Modular Camera System Installation Manual*.

2. From the Inputs Setup menu:
 - a. Ensure Input 1 (the motion detector) is set to **N.O.** (This setting is the default for Input 1.)
 - b. Ensure Input 5 (the gate contact) is set to **N.C.**
3. Set the alarm Outputs from the Outputs Setup menu:
 - a. Set Output 5 to **OSD**.
 - b. Set Output 6 to **Transmit**.
 - c. Set Output 7 to **Shot 5**.
 - d. Set Output 8 to **AutoTrack**.
4. Set up the Alarm Rule (for this example use Rule 2). Select the alarm Inputs:
 - a. From the Rule Setup menu select **Rule 2**.
 - b. Set the first input to **Alarm Input 1**. (The motion detector.)
 - c. Set the second input to **Alarm Input 5**. (The gate alarm contact.)

5. Select the alarm Outputs:
 - a. Set the first output to **OSD**.
 - b. Set the second output to **Shot 5** viewing the fence.
 - c. Set the third output to **AutoTrack** and select Latched.
 - d. Set the fourth output to **Transmit** (a Bilinx signal to the headend).
6. Enable the alarm Rule:
 - Highlight Enabled and select **YES**.

Example 3: Advanced Alarm Rule using AutoTrack

The following example explains how to set an alarm rule that moves the camera to a preset position and then activates the AutoTrack feature to track an intruder after an alarm is triggered. This example uses the Configuration Tool for Imaging Devices (CTFID) software tool. Refer to the *Configuration Tool for Imaging Devices User Guide*, available at www.boschsecurity.com.

1. Launch the CTFID software from a computer that is connected to a VG4 AutoDome.

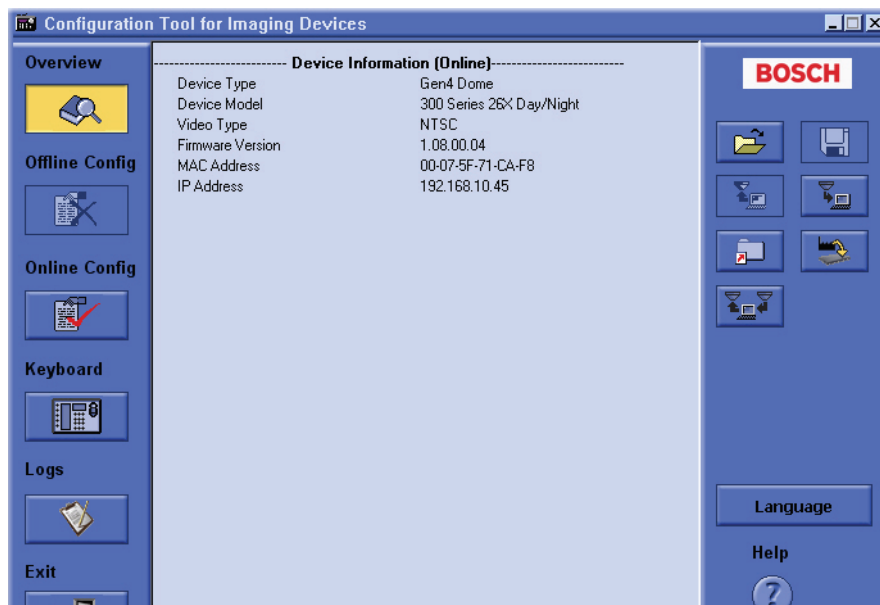


Figure 7.1 CTFID Overview Window

- Click the **Online Config** button and then expand **Alarm**.

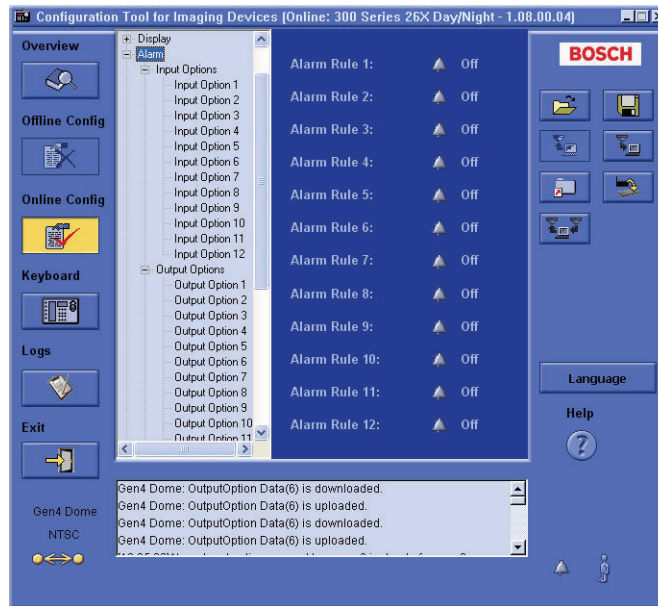


Figure 7.2 Expanded Alarm Group

- Expand Output Options; then click **Output Option 5**.
- Select **Tracking** from the Type drop-down list.
- Click **Output Option 6**.
- Select **Shot** from the Type drop-down list.
- Type the number **1** or use the slide bar to specify shot number **1**. (Shot numbers must be set prior to configuring an alarm rule. See *Section 3.2 Setting Preset Shots*, page 30, for instructions).

The AutoDome moves to this preposition when the alarm rule is true.

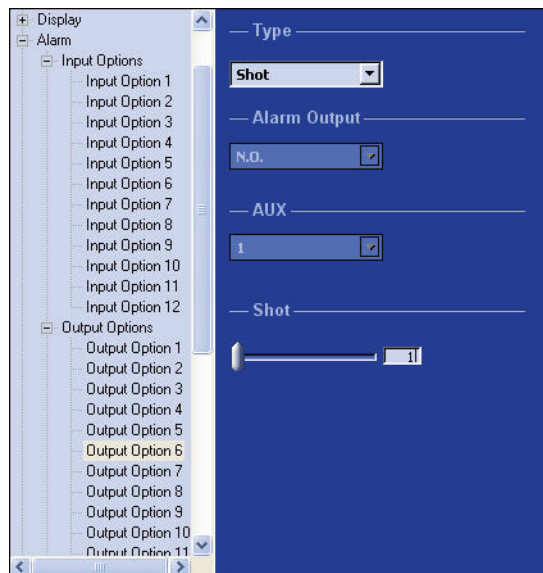


Figure 7.3 Output Option 6 Configuration

- Expand Alarm Rule; then click **Alarm Rule 1**.
- Click the **Yes** radio button to enable the rule.
- Type the number **1** or use the slider bar to select **1** for the Input option.
- Select **Alarm Input 1** from the Input Option drop-down list.
- Ensure that the Output number is set to **1**.

13. Select **Shot 1** from the Output Options drop-down list.
This option instructs the AutoDome to move to pre-position shot 1 when Input 1 is true.

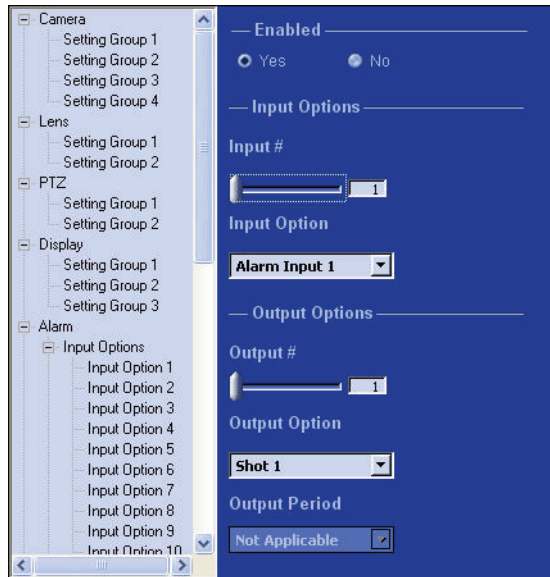


Figure 7.4 Alarm Rule 1 Configuration

14. Move the Output slider bar to **Output 2**.
15. Select **Tracking** from the Output Option drop-down list.
This option instructs the AutoDome to activate the AutoTrack feature after the input alarm is triggered and after the AutoDome moves to pre-position 1.
16. Select **5 sec** from the Output Period drop-down list.
This option instructs the AutoDome to turn off the AutoTrack feature after five seconds from when the tracked object is out of view.

7.2

AutoTrack Operation (500i Series Only)

The 500i Series AutoDome features enhanced AutoTrack software with more versatility and smoother object tracking. AutoTrack is now able to continuously follow an individual even if the person passes behind a Privacy Mask. When used with Virtual Mask, it is able to ignore predefined areas of background motion.

You can manually start AutoTrack or program the VG4 500i Series AutoDome to automatically turn on AutoTrack.

- **Manual**
 - Enter the keyboard command **ON-78-ENTER**.
 - In Pelco Mode, open the Main menu, select the Advanced menu, and then select AutoTrack On.
- **Automatic**
 - During a pre-position tour.
 - During AutoPan.
 - AutoDome activates AutoTrack after a period of Inactivity (Return to Scene 1 or Return to Previous Aux), if AutoTrack is programmed for these activities.



NOTICE! For proper operation AutoTrack requires that the camera height be set in the software. Open the Bosch Main menu, select the Advanced menu and select Camera Height to enter the height.

7.2.1 AutoTrack Settings and Recommendations

AutoTrack operates by recognizing an individual in motion and zooms-in to approximately 50% of the field of view for an average target height of six feet. In addition to the camera height, other factors may interfere with AutoTrack operation.

Setting the Camera Height

To ensure smooth tracking set the Camera Height accurately. Bosch recommends a minimum camera height of 3.6 m (12 ft).

1. Press **OFF-90-ENTER** to turn off the command lock.
2. Press **ON-46-ENTER** to access the **Main** Menu.
3. Use the joystick to highlight the **Advanced** menu.
4. Press **Focus/Iris** to open the menu.
5. Highlight the **Camera Height** option and press the **Focus/Iris** button.
6. Enter a value between 3.6 m (12 ft) and 100 m (328.1 ft).
7. Press **Focus/Iris** again to accept the camera height value.
8. Exit the **Advanced** menu; then exit the **Main** menu.

Ensuring Smooth AutoTrack Operation

Factors such as the viewing angle and unwanted motion (from trees, for example) may interfere with AutoTrack operation. Use the following recommendations to ensure smooth AutoTrack operation:

- **Mount/Mounting Surface Stability**
 - Mount the camera in the most stable position. Avoid locations affected by vibrations, such as those caused by a roof-top air conditioner. These vibrations may cause complications when the camera zooms-in on a target.
 - Use the pendant arm mount, if possible. This mount option provides the most stability for the camera.
 - Use guy wires to protect against strong winds if using the parapet mount.
- **Field of View**
 - Select a location and viewing angle that allows the flow of people to move across the camera's field of view.
 - Avoid motion that moves directly towards the camera.
 - Avoid locations that attract large numbers of people, such as retail stores or intersections.
- **Unwanted Motion**
 - Use the Virtual Masking feature (see *Section 7.3 Virtual Masking (500i Series Only)*, page 52) to mask unwanted motion from trees or cars. Bosch recommends that you draw the virtual mask 10% larger than the object to be masked.
 - Avoid neon lights, flashing lights, night time lights, and reflected light (from a window or mirror, for example). The flickering of these lights can affect the AutoTrack operation. Use a Virtual Mask to hide these type of lights if they cannot be avoided.
 - Check the virtual mask periodically to ensure that it still covers the entire object to be masked. Adjust the mask if necessary.

7.2.2

AutoTrack Optimization

The AutoDome achieves optimum tracking performance when the focal length of the lens during AutoPan is as close to the focal length of the lens during an AutoTrack operation. The ambient light conditions also affect the AutoTrack performance.

Dynamic Light Conditions

The ambient lighting conditions affect AutoTrack performance, especially in outdoor dynamic lighting conditions that change daily or hourly. To optimize the AutoTrack performance under changing light conditions, Bosch recommends that you configure the AutoTrack Sensitivity and the AutoPan speeds.



NOTICE! The VG4 AutoDome Service Pack 1.05 contains upgrades that allow the AutoDome to activate the AutoTrack while in AutoPan mode.

Bosch recommends setting the AutoTrack Sensitivity to Auto and suggests the following AutoPan speed for outdoor conditions:

Camera Focal Length	Maximum Suggested AutoPan Speed (degrees/sec)
Near-field (Wide Angle)	5
Mid-field	2
Far-field (Telephoto)	1

If you need a higher AutoPan speed, set the AutoTrack Sensitivity to a value between 1 and 10 in the Advanced Feature Setup menu.

Setting AutoTrack Optimization Parameters

1. Turn off the command lock (if active):
 - From a keyboard: press **OFF-90-ENTER**.
 - From the Aux Control tab (located on the LIVEPAGE view): enter **90-OFF**.
2. Access the Main Menu:
 - From a keyboard: press **ON-46-ENTER**.
 - From the Aux Control tab: enter **46-ON**.
3. Access the Advanced Feature Setup menu.
4. Select the AutoTrack Sensitivity option and change the parameter to **Auto** or to a value between **1–10**.
5. Exit the **AutoTrack Sensitivity** menu. Then, exit the **Advanced Feature Setup** menu.
6. Access the **PTZ Setup** menu.
7. Select the **AutoPan** option and change the parameter to one of the suggested values in the table above.
8. Exit the **AutoPan** menu. Then, exit the **PTZ Setup** menu and finally exit the **Main** menu.

Consistent Light Conditions

You may use higher AutoPan speeds in consistent indoor or outdoor ambient light conditions, but Bosch recommends not exceeding a speed of more than 15 degrees/sec. Then modify the AutoTrack Sensitivity setting to reach the optimal results.

7.3 Virtual Masking (500i Series Only)

Virtual Masking is a unique Bosch technology that allows you to create an “invisible” area that ignores unwanted background motion. These invisible masks are similar to privacy zones, except that the AutoDome AutoTrack and Motion Detection algorithms can see them.

- To configure a Virtual Mask, open the **Main** menu, select the **Advanced** menu, then select **Virtual Masking**. To setup a Virtual Mask follow the on-screen menu instructions.
- In Pelco Mode, open the Main menu, select the Advanced menu, then select Virtual Masking. To setup a Virtual Mask follow the on-screen menu instructions.



NOTICE! Draw the mask 10% larger than the object to ensure that the mask completely covers the object as the AutoDome zooms in and out.

7.4 Privacy Masking (300 and 500i Series Only)

Privacy Masking is used to block out a specific area of a scene from being viewed. Mask choices have been expanded to include black, white, or blurred, and can be configured with three, four, or five corners to cover more complex shapes.



NOTICE! Privacy Masking does not hinder AutoTrack from tracking an object.

- To configure a Privacy Mask, open the **Main** menu, select **Display Setup**, and then select **Privacy Mask**. Alternatively, enter the keyboard command **ON-87-ENTER**. To setup a privacy mask, follow the on-screen menu instructions.
- In Pelco Mode open the **Pelco Main** menu, open the **Bosch** menu, select the **Display Setup** menu, and finally select **Privacy Masking**. To setup a privacy mask, follow the on-screen menu instructions.



NOTICE! Draw the mask 10% larger than the object to ensure that the mask completely covers the object as the AutoDome zooms in and out.

7.5 Motion Detection with Region of Interest (500i Series Only) (Preset positions 90 through 99)

With the 500i Series AutoDome, the motion detection software can be configured to create a Region of Interest within multiple preset positions or scenes. It can take advantage of Virtual Masking to ignore motion in predefined areas. Motion Detection can also be used as an Alarm Rule input.

Preset positions 90 through 99 are reserved for programming motion detection scenes.



NOTICE! Motion Detection always takes precedence over AutoTrack object tracking.

To set up a scene with Motion Detection:

1. Choose an unused Preset position from 90 to 99. For this example use Preset scene 95.
2. Enter the keyboard command **SET-95-ENTER**.
3. Select **YES** at the Apply Motion Detection? prompt. (If NO is selected, the Preset scene does not activate Motion Detection.)
4. Select **YES** at the Apply Region of Interest? prompt. (If NO is selected, the entire scene is used for Motion Detection.)
5. Follow the on-screen menu instructions to construct the shape of the screen area you want to detect motion within.



NOTICE! Up to five (5) anchor points can be used to form the area which you want to detect motion within. Motion Detection is not activated until the Preset scene is recalled. The Motion Detection icon "M" appears in the upper left-hand corner of the display.

7.6

Image Stabilization (500i Series Only)

Image Stabilization becomes increasingly important as zoom ranges are extended. The advanced image stabilization algorithms of the 500i Series eliminate camera shake for exceptional image clarity. Bosch achieves this clarity without reducing camera sensitivity or picture quality.

- To configure image stabilization, open the **Main** menu, select the **Advanced** menu, and then select **Stabilization** to turn on the feature.
- In Pelco Mode open the **Main** menu, select the **Advanced** menu, and then select **Stabilization** to turn on the feature.

7.7

Pre-position Tour

The 200 Series AutoDome features one (1) standard preset tour, while the 300 and 500i Series AutoDomes feature two (2) preset tours. Each preset scene is saved for playback later. Tour 1 is a standard tour that only recalls the scenes in the exact sequence they were shot. Scenes can be added or deleted on the tour, but the sequence cannot be changed. To add or remove scenes on Tour 1 enter the keyboard command **SHOT-900-ENTER** and follow the on-screen instructions.

Tour 2 (300 and 500i Series only) is a customizable tour that allows you to rearrange the sequence of scenes on the tour by inserting and deleting scenes. To enter the Edit Tour 2 menu, enter the keyboard command **SET-900-ENTER** and follow the on-screen instructions.

8 Using the IP AutoDome

The VG4-200, VG4-300, and VG4-500i Series AutoDomes can be ordered with an optional IP module that allows the AutoDome to transmit PTZ control commands and images over a TCP/IP network. It also allows users to configure the AutoDome camera display settings, camera operating settings, and to configure the network parameters.

The IP AutoDome incorporates a network video server in the IP module. The primary function of the server is to encode video and control data for transmission over a TCP/IP network. With its MPEG-4 encoding, it is ideally suited for IP communication and for remote access to digital video recorders and multiplexers. The use of existing networks means that integration with CCTV systems or local networks can be achieved quickly and easily. Video images from a single camera can be simultaneously received on several receivers.

8.1 Overview of Features

The IP module adds the following functionality to an AutoDome system:

Function	Description
Video Encoding	The camera uses the H.264 compression standard and ensures that the data rate remains low even with high image quality and can also be adapted to local conditions within wide limits.
Dual Streaming	Encodes dual data streams simultaneously according to two individually customized profiles. This feature creates two (2) data streams per camera that can serve different purposes. For example, one (1) data stream for local recording and one (1) data stream optimized for transmission over the Local Area Network (LAN).
Multicast	Enables simultaneous, real-time transmission to multiple receivers. The network must implement the UDP and IGMP V2 protocols as a prerequisite for Multicasting.
Configuration	Allows configuration for all camera settings from a Web browser on the local network (Intranet) or on the Internet. You can also update the firmware, load device configurations, store configuration settings, and copy these settings from one camera to another.
Snapshots	Allows you to take and store individual video frames as JPEG images from the Web browser interface.
Backup	Saves video images as a file on a computer's hard drive from the Web browser interface.
Audio	Switches between Biphase-in to Audio-in (line 2V P-P) microphone.
Record	Allows configuration for the recording options of the IP module. You can record video from the Livepage to a hard drive or you can opt to store up to 8 MB of video on the IP module.

8.2 System Requirements

The AutoDome Easy II IP requires specific software and hardware to allow a user to view live images and to configure camera settings over a TCP/IP network. These requirements are:

- A computer with the Microsoft Windows XP or Vista operating system, network access, and the Microsoft Internet Explorer Web browser version 7.0 or later, or
- A computer with the Microsoft Windows XP or Vista operating system, network access, and reception software such as the Bosch VIDOS software or the Bosch Divar XF, or
- A compatible hardware decoder from Bosch Security Systems as a receiver and a connected video monitor.

If you choose to use a computer running Microsoft Internet Explorer or any of the Bosch software, the computer must conform to the following minimum requirements:

- Processor: 1.8 GHz Pentium IV
- RAM: 256 MB
- Video system: 128 MB video memory, 1024x768 display with a minimum of 16-bit color
- Network interface: 100-BaseT
- Microsoft Internet Explorer, version 7.0 or higher
- You must install the following software (available on the Bosch Security Systems, Inc. Web site at www.boschsecurity.com)
- DirectX 9.0c
- Java Virtual Machine
- MPEG ActiveX utility
- .Net 2.0
- VideoSDK

**NOTICE!**

Ensure the graphics card is set to 16-bit or 32-bit color. If you need further assistance, contact your PC system administrator.

8.3 Connecting the IP AutoDome to the PC

1. Install the IP AutoDome according to the instructions in the *AutoDome Modular Camera System Installation Manual*.
2. Connect an Ethernet cable from the IP AutoDome RJ45 connector to a dedicated network switch to bypass the Local Area Network (LAN).
3. Connect the dedicated network switch to the RJ45 connector on the PC (see option A below).

**NOTICE!**

The IP AutoDome can also be connected directly to a PC using an Ethernet crossover cable with RJ45 connectors (see option B below).

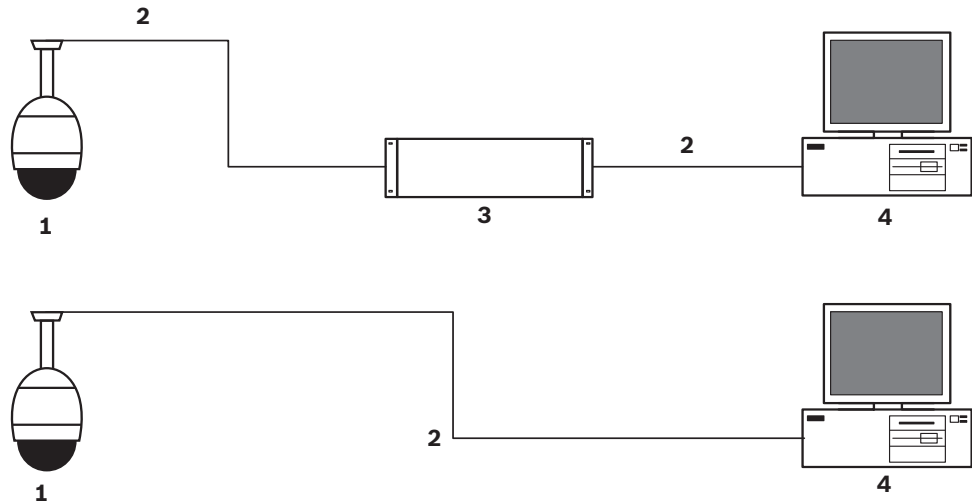


Figure 8.1 IP AutoDome System Configuration

1	AutoDome
2	IP Connection
3	Network Switch
4	Computer

8.4 Configuring the IP AutoDome Camera

To operate the camera in your network you must assign it a valid network IP address. The default IP address is 192.168.0.1, but you may have to change this address if it conflicts with another device on your network.

To properly configure the camera for your network, you need the following information:

- Unit IP address: An identifier for the camera on a TCP/IP network. For example, 140.10.2.110 is a valid syntax for an IP address.
- Subnet mask: A mask used to determine what subnet an IP address belongs to.
- Gateway IP address: A node on a network that serves as an entrance to another network.
- Port: An endpoint to a logical connection in TCP/IP and UDP networks. The port number identifies the use of the port for use through a firewall connection.



NOTICE!

Ensure that the network parameters of your cameras are available before you begin configuration.

The IP AutoDome defaults are as follows:

- IP Address: 192.168.0.1
- Subnet Mask: 255.255.255.0
- Gateway IP Address: 0.0.0.0

The following sections provide instructions about installing the software necessary to view images over an IP connection, configuring the IP network settings and accessing the IP AutoDome images from a Web browser.

8.5 Installing the Required Software

To view live video, you must install Bosch MPEG ActiveX, DirectX, and Java Virtual Machine. To view live video from an IP-enabled VG4 AutoDome in Microsoft Internet Explorer or to change VG4 AutoDome configurations, you must install the following software in this order:

1. Sun Java
2. Microsoft .NET
3. Microsoft DirectX
4. MPEG-ActiveX
5. Bosch Configuration Manager

You can find the latest versions of the required software on the Bosch Security Systems, Inc. Web site. To locate the software, follow these directions:

1. Launch a Web browser and navigate to one of the following URLs:
 - For customers in the United States: <http://www.boschsecurity.us>
 - For customers outside of the United States: <http://www.boschsecurity.com>, then click your region and finally click the link for your country (if available).
2. Click the **CCTV** or **Products** link (depending on the country Web site) in the left pane of the Web page.
3. Click the **Software** link under the Download Library section in the left pane.
4. Click **OK** to agree to the Bosch Software License Agreement.
5. Click the **CCTV** link under the Software heading in the center frame.
6. Click the **Cameras, PTZ** link to access the software for Bosch PTZ cameras. After you click **Cameras, PTZ** the browser opens the Software Download page for VG4 and VEZ AutoDomes.
7. Scroll down the page to the **AutoDome TCP/IP Communications Module** heading.
8. Right-click the appropriate language selection and choose **Save Target As** from the pop-up menu for these software packages:
 - Sun Java
 - Microsoft .NET
 - Microsoft DirectX
 - MPEG-ActiveX
 - ConfigManager
9. Save each software package to the computer that contains the Microsoft Internet Explorer you will use to view the live video images from an IP-enabled VG4 AutoDome. You should now have the following software packages stored on the computer:

- MPEG-ActiveXXX_enUS_E3366678923.zip (MPEG-ActiveX)
- DirectXXX_enUS_E2352554507.zip (DirectX)
- dotnetfx_enUS_T5007298827.exe (.NET)
- jre-XXX-windows-i586-p-s_xxXX_XXXXXXXXXX.exe (Java)
- SetupConfigManagerXXXXXXXXXX_enUS_F4155139595.exe (ConfigManager)

Note: The XXX denotes the software version number. This number changes as updates are made to the software packages.

10. Install the software packages using the procedure below:
 - Unzip the MPEG-ActiveXXX_enUS_E3366678923.zip and the DirectXXX_enUS_E2352554507.zip files. Ensure that you maintain the directory structures for each software package.
 - Double-click the jre-XXX-windows-i586-p-s_xxXX_XXXXXXXXXX.exe file to initiate the Java installation.
 - Follow the Java Installation Wizard instructions until the software is installed.
 - Double-click dotnetfx_enUS_T5007298827.exe to initiate the .NET installation.
 - Follow the .NET Installation Wizard instructions until the software is installed.
 - Open the DirectXXX directory. Then, double-click the dxsetup.exe file to initiate the DirectX installation.
 - Follow the DirectX Installation Wizard instructions until the software is installed.
 - Double-click MPEGAx.exe to initiate the MPEG-ActiveX installation.
 - Follow the MPEG-ActiveX Installation Wizard instructions until the software is installed.
 - Double-click SetupConfigManagerXXXXXXXXXX_enUS_F4155139595.exe to initiate the ConfigManager installation.
 - Follow the ConfigManager Installation Wizard instructions until the software is installed.
11. Launch Microsoft Internet Explorer and navigate to the URL of an IP-enabled VG4 AutoDome. Ensure that you can see the live video in the Livepage.
12. Launch the Configuration Manager utility and verify that the IP-enabled VG4 AutoDomes in your security system are listed. (You may have to configure some settings in the Configuration Manager.)

8.5.1 Changing the Network Settings

The IP Module has a default IP address of 192.168.0.1. To change the IP address or any network settings, you can use the Configuration Manager software supplied on the CD or the IP AutoDome Web Server.



NOTICE!

Contact your local network administrator for a valid IP address, Subnet Mask, and a Gateway IP Address.

Using the Configuration Manager

Configuration Manager is an optional network utility provided on the Bosch Security Systems Web site (see *Section 8.5 Installing the Required Software, page 57*). Use the Configuration Manager Manual provided in the Documentation folder on the CD to make any configuration changes.



NOTICE!

Depending on the PC network security settings, the user may have to add the new IP address to the browser's **trusted sites** list for the IP AutoDome controls to operate.

Using the IP AutoDome Web Server

The IP AutoDome incorporates a network video server in the IP module.

To configure the camera using the IP AutoDome Web server, do the following:

1. Set the IP address on the PC to 192.168.0.10 to ensure that the PC and the IP AutoDome are on the same Subnet.
2. Launch Microsoft Internet Explorer and navigate to the following URL: http://192.168.0.1
The Web browser opens the LivePage for the IP AutoDome; a security warning message is displayed.
3. Check the `Always Trust` box, then click `YES`.
4. Click the `Settings` link, located at the top of the LivePage.
5. Click the `Service Settings` link, located in the left pane of the `Settings` window.
6. Click the `Network` link to open the `Network Settings` page.

Figure 8.2 Network Settings Page

7. Configure the settings on this page based on the addresses provided by your local network administrator.



NOTICE!

Click the **Help on this page?** link if you need more information.

8. Click the `Set` button to save the settings.
9. Launch another instance of Microsoft Internet Explorer.
10. Type the original IP address followed by `/reset` (for example, http://192.168.0.1/reset) in the address bar and click `Go` to restart the IP AutoDome. Once you restart the IP AutoDome, use the new IP Address to access the LivePage.
11. Disconnect the IP AutoDome Ethernet cable from the dedicated network switch and reconnect the Ethernet cable to the local area network (LAN).

8.6 The LIVEPAGE

Once the connection is established, the Web browser displays the **LIVEPAGE**. It shows the live video image on the right of the browser window. Depending on the configuration, various text overlays may be visible on the live video image (see the IP AutoDome online help). Other information may be shown next to live video image on the **LIVEPAGE**. The display depends on the settings on the **Livepage Configuration** page (see the IP AutoDome online help).

Maximum Number of Connections

If you do not connect, the unit may have reached its maximum number of connections. Depending on the unit and network configuration, each IP AutoDome can have up to 25 Web browser connections or up to 50 connections via VIDOS or Bosch Video Management System.

Protected IP AutoDome

If the IP AutoDome is password protected against unauthorized access, the Web browser displays a corresponding message and prompts you to enter the password when you attempt to access protected areas.



NOTICE!

An IP AutoDome offers the option to limit the extent of access using various authorization levels (see the IP AutoDome online help).

1. Enter the user name and associated password in the corresponding text fields.
2. Click **OK**. If the password is entered correctly, the Web browser displays the page that was called up.

Protected Network

If a RADIUS server is employed in the network for managing access rights (802.1x authentication), the IP AutoDome must be configured accordingly, otherwise no communication is possible.

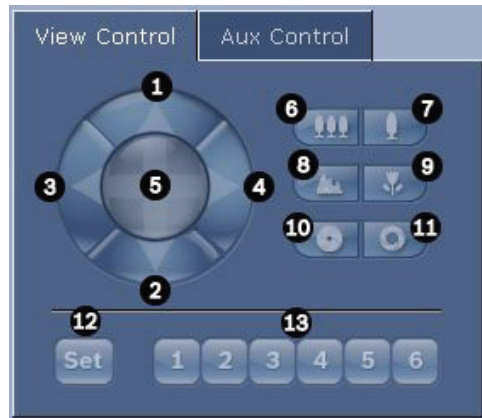
Image Selection

You can view the image of the camera in different displays.

- ▶ Click one of the tabs **Stream 1**, **Stream 2** or **M-JPEG** below the video image to toggle between the different displays of the camera image.

View Control

The View Control tab allows you to control camera functions (pan, tilt, zoom, focus, and iris), navigate through on-screen menus and to view preset shots.

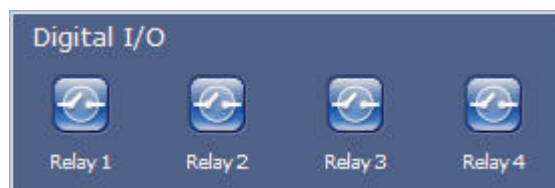


Number	Description	Number	Description
1	Tilts the camera up	8	Focus far ²
2	Tilts the camera down	9	Focus near ²
3	Pans the camera to the left	10	Iris close ²
4	Pans the camera to the right	11	Iris open ²
5	Pans and tilts the camera in all directions	12	Sets the position for corresponding pre-sets 1, 2, 3, 4, 5, and 6
6	Zoom out ¹	13	Moves the camera to pre-set shot numbers 1, 2, 3, 4, 5, and 6
7	Zoom in ¹		

1. This function is also accessible by using the mouse scroll wheel while in the Live video frame.
 2. This button is also used as the "Enter" button to select menu items from the AUX tab.

- To control a peripheral, click the appropriate controls.
- Move the mouse cursor over the video image. Additional options for controlling peripherals are displayed with the mouse cursor.
- To manually pan throughout the image area, move your cursor over any part of the live video. The image area displays a directional arrow (lkjmhigf), then click and hold the right mouse key to pan the camera.

Digital I/O



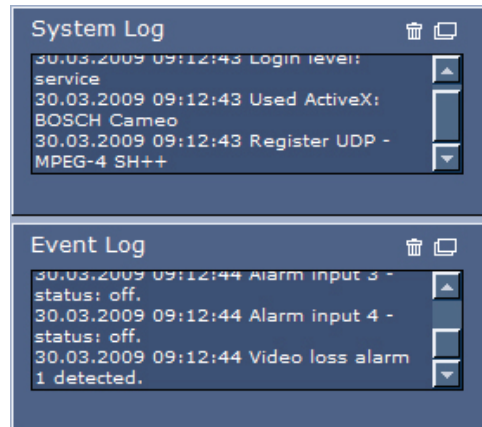
The alarm icons **Input 1** to **Input 4** are for information purposes and indicate the status of an alarm input: When an alarm is triggered, the corresponding icon lights up blue. The unit's configuration determines whether the alarm is displayed, as well as additional details (see the IP AutoDome online help).

Triggering Relay

You can switch connected units using the relays in the IP AutoDome (for example lights or door openers).

- ▶ To activate this, click the icon for the corresponding relay next to the video image. The icon will be red when the relay is activated.

System Log / Event Log



The **System Log** field contains information about the operating status of the IP AutoDome and the connection. You can save these messages automatically in a file (see the IP AutoDome online help).

Events such as the triggering or end of alarms are shown in the **Event Log** field. You can save these messages automatically in a file.

1. If you want to delete the entries, click the delete icon in the top right-hand corner of the relevant field.
2. If you want to view a detailed log, click the icon in the top right-hand corner of the relevant field. A new window will open.

Audio Function

Depending on the configuration, the IP AutoDome can send and receive audio signals. All users who are connected by browsers receive the audio signals sent by the IP AutoDome. Audio signals can only be sent to the IP AutoDome by the user who connects to the unit first.

1. On the **LIVEPAGE**, click anywhere next to the video image to remove the focus from the ActiveX.
2. Hold down the **F12** key to make a voice connection to the IP AutoDome. The browser's status bar displays the message **Send Audio ON**.
3. Release the **F12** key when you want to stop sending audio signals to the IP AutoDome. The status bar in Internet Explorer displays the message **Send Audio OFF**.



NOTICE!

When the connection maintaining voice contact with the IP AutoDome is broken, the next user to make a connection to the IP AutoDome can send audio data to the IP AutoDome.

8.6.1

Entering a Keyboard Control Command

The Aux Control tab is used to enter keyboard control commands. These commands are composed of a command number plus the appropriate function key (Show Shot, Set Shot Aux On or Aux Off). A valid combination either issues a command to the camera or displays an on-screen menu.

Aux Control Tab

The Aux Control tab is used to enter pre-programmed keyboard control commands. See *Section 6 Keyboard Commands by Number, page 43*, for a list of all commands. To access the Aux Control tab, navigate to the Livepage and click the Aux Control tab (see *Figure 8.3* below).



NOTICE!

The Aux Control tab can also be used to display the OSD menus. Once the OSD menus are displayed, the virtual joystick in the View Control tab can be used to navigate the menus, and the Focus and Iris buttons can be used to make menu selections.

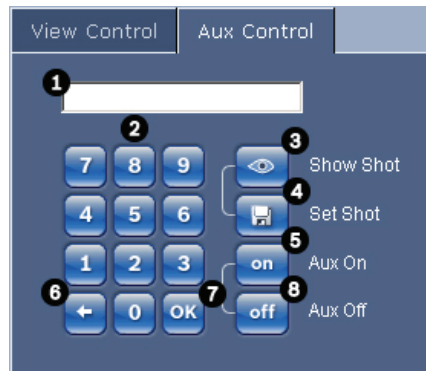


Figure 8.3 Aux Control Tab

Number	Description
1	Command number field
2	Keypad (numbers 0-9)
3	Show a preset shot
4	Set a preset shot
5	Initiates a command
6	Deletes a number in the Command Number field
7	Used to select a menu item
8	Stops a command

To Enter a Keyboard Control Command:

1. Place the cursor in the Command Number field.
2. Click the desired command number via the on-screen keypad.
3. Click either the Aux On or the Aux Off button to initiate or stop the command. See *Section 6 Keyboard Commands by Number, page 43*, for a list of commands.
4. If the command initiates a menu, use the Up/Down arrows on the View Control to navigate the menu. Click the Focus or Iris button to select a menu item.

To Set a Preset Shot:

Preset shots (or scenes) are camera positions that are saved in memory for future use.

1. Move your cursor over the live image and wait for the area to display a directional arrow.
2. Click and hold a mouse button to pan to the desired position you want to save.
3. Click any number combination from 1-99 (1-64 for a 200 Series AutoDome, 90-99 for 500i Series AutoDome are used for motion detection) from the on-screen keypad to identify the scene number.
4. Click the Set Shot button. The image area displays a message that indicates which shot number was saved.

To View a Preset Shot:

1. Click the number of the scene you want to view using the on-screen keypad.
2. Click the Show Shot button.

**NOTICE!**

For more information about the IP AutoDome settings and controls, click the **Help on this page?** link to open the IP AutoDome online help.

8.7**Saving Snapshots**

You can save individual images from the video sequence currently shown on the **LIVEPAGE** in JPEG format on your computer's hard drive. The icon for recording single images is only visible if the unit is configured to enable this process.

- ▶ Click the icon. The image is saved at a resolution of 704 × 576 pixels (4CIF). The storage location depends on the configuration of the IP AutoDome.

**8.8****Recording Video Sequences**

You can save sections of the video sequence currently shown on the **LIVEPAGE** on your computer's hard drive. The icon for recording video sequences is only visible if the unit is configured to enable this process.

1. Click the icon to start recording. The storage location depends on the configuration of the IP AutoDome. A red dot in the icon indicates that recording is in progress.



2. Click the icon again to stop recording.

**NOTICE!**

You can play back saved video sequences using the Player from Bosch Security Systems, which can be installed from the product CD supplied.

Image Resolution

Sequences are saved at the resolution that has been preset in the configuration for the encoder (see the IP AutoDome online help).

8.9**Running Recording Program**

The hard drive icon below the camera images on the **LIVEPAGE** changes during an automatic recording.



A moving graphic will appear to indicate a running recording. If no recording is taking place, a static icon is displayed.

9 VG4 Audio Connections

The audio version of the VG4 AutoDome has one audio input for line signals. The audio signals are transmitted one-way and in-sync with the video signals. As a result, a door intercom system can be connected at the camera location.



NOTICE! The line ports of the intercom should be used for transmitting audio signals on the intercom systems.

9.1 Audio Line Input Specifications

The following Line In specifications should be complied with in all cases:

- 5.5 Vpp max. Input voltage Impedance 9 Kohm, typical Sampling rate 8 KHz, 16 Bit, mono



NOTICE! There is an internal gain level adjustment in case the signal level is too low.

9.1.1 Wire Specifications

Long distances are more susceptible to introducing noise into the signal.

- Wire Type: Coax wire, AWG is dependant on the connector style selected
- Maximum Distance: Depends on the signal level

9.1.2 Connections

The Audio Input must be connected to the Biphas Input as follows:

1. Remove the 110 ohm Biphas termination resistor.
2. Connect an audio source with line level to the Biphas input of the VG4 as shown in the chart below:

Contact	Description
Biphase +	Audio In
Biphase -	Ground

9.1.3 Activating Audio Reception

To configure audio via the Web browser, do the following:

1. Open the IP AutoDome LivePage, then click the Settings tab.
2. Click the Camera Settings link from the left pane, then click Miscellaneous. The IP AutoDome displays the Audio settings.
3. Click the Audio radio button to activate audio over IP.



NOTICE! The audio signal is sent in a separate data stream parallel to the video data, and so increases the network load. The audio data is encoded according to G.711 and requires an additional bandwidth of approximately 80 Kbit/s for each connection.

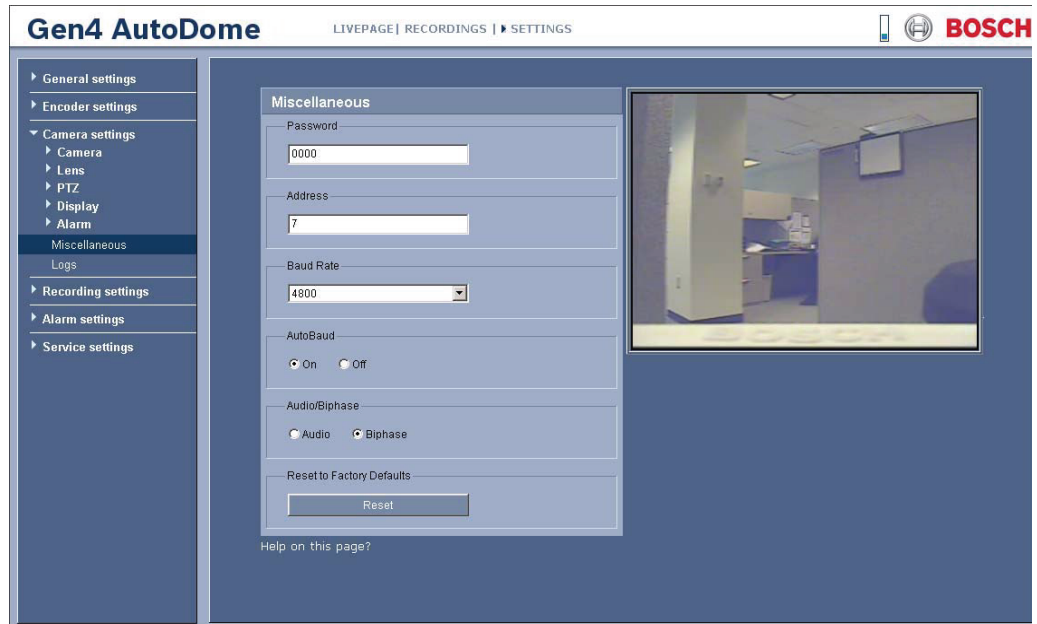


Figure 9.1 Configuring Audio Settings

9.1.4

Enabling Audio Transmission

To transmit audio via the IP connection, do the following:

1. Open the IP AutoDome LivePage, then click the Settings tab.
2. Click Service Settings from the left pane, then click Livepage Configuration. The IP AutoDome displays the Livepage Configuration screen (see *Figure 9.2*).
3. Click the Transmit Audio radio button to enable for audio.

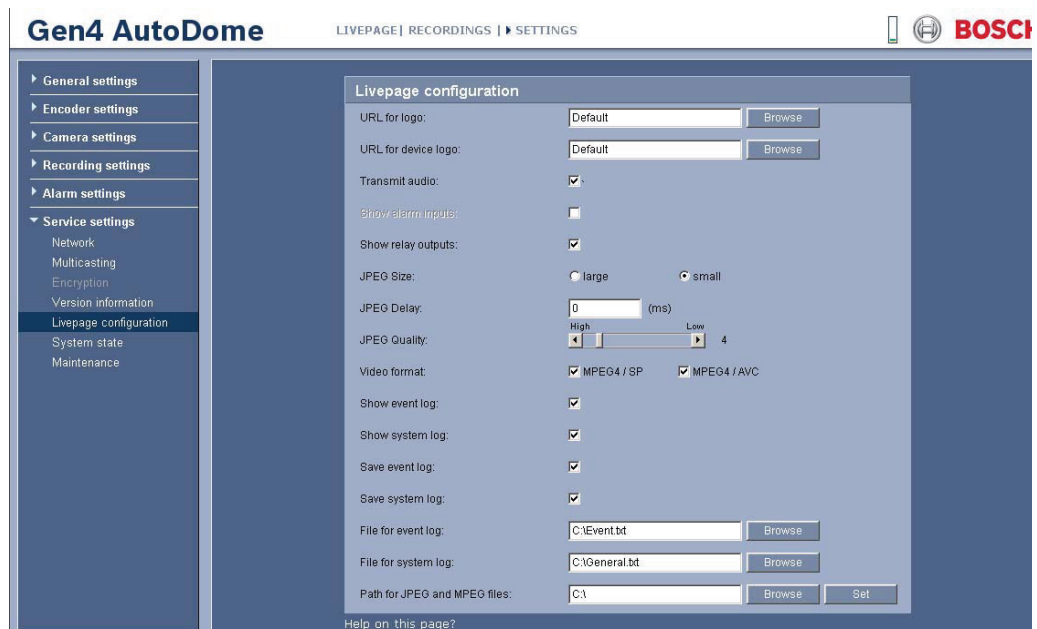


Figure 9.2 Livepage Configuration

9.1.5 Configuring Gain (optional)

Input gain control is supported over a range of -34B to +12dB. The current video image is shown in the small window next to the slide controls to help verify the audio source and improve the Peak levels. Set the gain of the audio signals to suit your specific requirements. Changes are effective immediately. The current level is displayed next to the slide control to help do this. Make sure that the display does not go beyond the green zone during modulation.

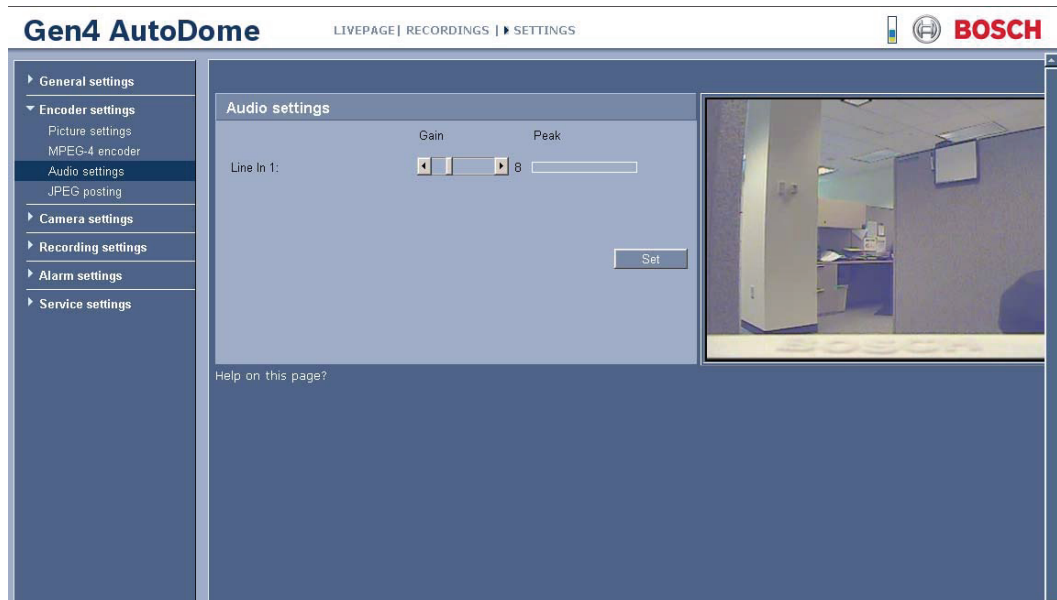


Figure 9.3 Setting Audio

10 Configuring the IP AutoDome

The **SETTINGS** page provides access to the configuration menu, which contains all the unit's parameters arranged in groups. You can view the current settings by opening one of the configuration screens. You can change the settings by entering new values or by selecting a predefined value from a list field.

There are two options for configuring the unit or checking the current settings:

- Basic mode
- Advanced mode

In **Basic Mode** the most important parameters are arranged in seven groups. This allows you to change the basic settings with just a few entries and then put the device into operation.

Advanced Mode is recommended for expert users or system support personnel. You can access all unit parameters in this mode. Settings that affect the fundamental functionality of the unit (such as firmware updates) can only be altered in the advanced mode.

All parameter groups are described in this chapter in the order in which they are listed in the configuration menu, from the top of the screen to the bottom.



CAUTION!

The settings in the advanced mode should only be processed or modified by expert users or system support personnel.

All settings are backed up in the IP AutoDome memory so they are not lost even if the power fails.

Starting Configuration

- ▶ Click the **SETTINGS** link in the upper section of the window. The Web browser opens a new page with the configuration menu.

Navigation

1. Click one of the menu items in the left window margin. The corresponding submenu is displayed.
2. Click one of the entries in the submenu. The Web browser opens the corresponding page.

Making Changes

Each configuration screen shows the current settings. You can change the settings by entering new values or by selecting a predefined value from a list field.

- ▶ After each change, click **Set** to save the change.
-



CAUTION!

Save each change with the associated **Set** button.

Clicking the **Set** button saves the settings only in the current field. Changes in any other fields are ignored.

10.1 Basic Mode: Device Access

Device name

You can give the IP AutoDome a name to make it easier to identify. The name makes the task of administering multiple units in larger video monitoring systems easier, for example using the VIDOS or Bosch Video Management System programs.

The device name is used for the remote identification of a unit, in the event of an alarm for example. For this reason, enter a name that makes it as easy as possible to quickly identify the location.

**CAUTION!**

Do not use any special characters, for example **&**, in the name. Special characters are not supported by the system's internal recording management and may therefore result in the Player or Archive Player programs being unable to play back the recording.

Camera 1

The camera name makes it easier to identify the remote camera location, in the event of an alarm for example. It will be displayed in the video screen if configured to do so (see *Section Camera name stamping, page 74*). The camera name makes the task of administering cameras in larger video monitoring systems easier, for example using the VIDOS or Bosch Video Management System programs.

Enter a unique, unambiguous name for the camera in this field.

**CAUTION!**

Do not use any special characters, for example **&**, in the name. Special characters are not supported by the system's internal recording management and may therefore result in the Player or Archive Player programs being unable to play back the recording.

Password

An IP AutoDome is generally protected by a password to prevent unauthorized access to the unit. You can use different authorization levels to limit access.

The IP AutoDome operates with three authorization levels: **service**, **user** and **live**.

The highest authorization level is **service**. After entering the correct password, you can access all the functions of the IP AutoDome and change all configuration settings.

With the **user** authorization level, you can operate the unit and also control cameras, for example, but you cannot change the configuration.

The lowest authorization level is **live**. It can only be used to view the live video image and switch between the different live image displays.

You can define and change a password for each authorization level if you are logged in as **service** or if the unit is not password protected.

Enter the password for the appropriate authorization level here.

**NOTICE!**

Proper password protection is only guaranteed when all higher authorization levels are also protected with a password. If a **live** password is assigned, for example, a **service** and a **user** password must also be set. When assigning passwords, you should therefore always start from the highest authorization level, **service**, and use different passwords.

Confirm password

In each case, enter the new password a second time to eliminate typing mistakes.

10.2 Basic Mode: Date/Time

Device date/Device time/Device time zone

If there are multiple devices operating in your system or network, it is important to synchronize their internal clocks. For example, it is only possible to identify and correctly evaluate simultaneous recordings when all units are operating on the same time. If necessary, you can synchronize the unit with your computer's system settings.

- ▶ Click the **Sync to PC** button to copy your computer's system time to the IP AutoDome.

Time server IP address

The IP AutoDome can receive the time signal from a time server using various time server protocols, and then use it to set the internal clock. The unit polls the time signal automatically once every minute.

- ▶ Enter the IP address of a time server here.

Time server type

Select the protocol that is supported by the selected time server. Preferably, you should select the **SNTP server** as the protocol. This supports a high level of accuracy and is required for special applications and subsequent function extensions.

Select **Time server** for a time server that works with the protocol RFC 868.

10.3 Basic Mode: Network

The settings on this page are used to integrate the IP AutoDome into an existing network. Some changes only take effect after the unit is rebooted. In this case, the **Set** button changes to **Set and Reboot**.

1. Make the desired changes.
2. Click the **Set and Reboot** button. The IP AutoDome is rebooted and the changed settings are activated.



CAUTION!

If you change the IP address, subnet mask or gateway address, the IP AutoDome is only available under the new addresses after the reboot.

DHCP

If a DHCP server is employed in the network for the dynamic assignment of IP addresses, you can activate acceptance of IP addresses automatically assigned to the IP AutoDome.

Certain applications (VIDOS, Bosch Video Management System, Archive Player, Configuration Manager) use the IP address for the unique assignment of the unit. If you use these applications, the DHCP server must support the fixed assignment between IP address and MAC address, and must be appropriately set up so that, once an IP address is assigned, it is retained each time the system is rebooted.

IP address

Enter the desired IP address for the IP AutoDome in this field. The IP address must be valid for the network.

Subnet mask

Enter the appropriate subnet mask for the selected IP address here.

Gateway address

If you want the unit to establish a connection to a remote location in a different subnet, enter the IP address of the gateway here. Otherwise leave the box blank (**0.0.0.0**).

10.4 Basic Mode: Encoder Profile

Default profile

You can select a profile for encoding the video signal.

You can use this to adapt the video data transmission to the operating environment (for example network structure, bandwidth, data load).

Pre-programmed profiles are available, each giving priority to different perspectives. When selecting a profile, details are displayed in the list field. Below is a brief description of the factory default settings for the encoder profiles.



NOTICE!

The names and the technical details for the encoder profiles depend on the configuration of the device.

- **High resolution 1**
High quality, connections with the highest bandwidth, resolution 704 × 576/480 pixels
- **High resolution 2**
High quality, connections with high bandwidth, resolution 704 × 576/480 pixels
- **Low bandwidth**
High resolution, connections with low bandwidth, resolution 704 × 576/480 pixels
- **DSL**
DSL connections with 500 kbps, resolution 352 × 288/240 pixels
- **ISDN (2B)**
ISDN connections via two B-channels, resolution 352 × 288/240 pixels
- **ISDN (1B)**
ISDN connections via one B-channel, resolution 352 × 288/240 pixels
- **MODEM**
Analog modem connections with 20 kbps, resolution 352 × 288/240 pixels
- **GSM**
GSM connections with 9,600 baud, resolution 352 × 288/240 pixels

10.5 Basic Mode: Audio

You can set the gain of the audio signals to suit your specific requirements. Your changes are effective immediately.

If you connect via Web browser, you must activate the audio transmission on the **LIVEPAGE Functions** page (see *Section 10.13 Advanced Mode: LIVEPAGE Functions, page 76*). For other connections, the transmission depends on the audio settings of the respective system.

Audio

The audio signals are sent in a separate data stream parallel to the video data, and so increase the network load. The audio data are encoded according to G.711 and require an additional bandwidth of approx. 80 kbps for each connection. If you do not want any audio data to be transmitted, select **Off**.

Line In

You can set the line input gain. Make sure that the display does not go beyond the green zone during modulation.

10.6 Basic Mode: Recording

For long-term, authoritative images, it is essential that you use an appropriately sized iSCSI system.

Here you can select a storage medium and immediately start or stop the recording.

Storage medium

1. Select the required storage medium from the list.
2. Click the **Start** button to start the recording immediately.

10.7 Basic Mode: System Overview

The data on this page are for information purposes only and cannot be changed. Keep a record of this information in case technical assistance is required.



NOTICE!

You can select all required text on this page with the mouse and copy it to the clipboard with the [Ctrl]+[C] key combination, for example if you want to send it via e-mail.

10.8 Advanced Mode: Identification

Device ID

Each IP AutoDome should be assigned a unique identifier that you can enter here as an additional means of identification.

Device name

You can give the IP AutoDome a name to make it easier to identify. The name makes the task of administering multiple units in larger video monitoring systems easier, for example using the VIDOS or Bosch Video Management System programs.

The device name is used for the remote identification of a unit, in the event of an alarm for example. For this reason, enter a name that makes it as easy as possible to quickly identify the location.



CAUTION!

Do not use any special characters, for example **&**, in the name.

Special characters are not supported by the system's internal recording management and may therefore result in the Player or Archive Player programs being unable to play back the recording.

Camera 1

The camera name makes it easier to identify the remote camera location, in the event of an alarm for example. It will be displayed in the video screen if configured to do so (see *Section Camera name stamping, page 74*). The camera name makes the task of administering cameras in larger video monitoring systems easier, for example using the VIDOS or Bosch Video Management System programs.

Enter a unique, unambiguous name for the camera in this field. You can use both lines for this.



CAUTION!

Do not use any special characters, for example **&**, in the name.

Special characters are not supported by the system's internal recording management and may therefore result in the Player or Archive Player programs being unable to play back the recording.

You can use the second line for entering additional characters; these can be selected from a table.

1. Click the icon next to the second line. A new window with the character map is opened.
2. Click the required character. The character is inserted into the **Result** field.
3. In the character map, click the << and >> icons to move between the different pages of the table, or select a page from the list field.
4. Click the < icon to the right of the **Result** field to delete the last character, or click the **X** icon to delete all characters.
5. Now click the **OK** button to apply the selected characters to the second line of the **Camera 1** parameters. The window will close.

Initiator extension

You can attach your own text to the initiator name of the IP AutoDome to make the unit easier to identify in large iSCSI systems. This text is added to the initiator name, separated from it by a full stop. You can see the initiator name in the system overview (see *Section 10.59 Advanced Mode: System Overview, page 116*).

10.9 Advanced Mode: Password

An IP AutoDome is generally protected by a password to prevent unauthorized access to the unit. You can use different authorization levels to limit access.



NOTICE!

Proper password protection is only guaranteed when all higher authorization levels are also protected with a password. If a **live** password is assigned, for example, a **service** and a **user** password must also be set. When assigning passwords, you should therefore always start from the highest authorization level, **service**, and use different passwords.

Password

The IP AutoDome operates with three authorization levels: **service**, **user** and **live**.

The highest authorization level is **service**. After entering the correct password, you can access all the functions of the IP AutoDome and change all configuration settings.

With the **user** authorization level, you can operate the unit and also control cameras, for example, but you cannot change the configuration.

The lowest authorization level is **live**. It can only be used to view the live video image and switch between the different live image displays.

You can define and change a password for each authorization level if you are logged in as **service** or if the unit is not password protected.

Enter the password for the appropriate authorization level here.

Confirm password

In each case, enter the new password a second time to eliminate typing mistakes.

10.10 Advanced Mode: Date/Time

Date format

Select your required date format.

Device date/Device time

If there are multiple devices operating in your system or network, it is important to synchronize their internal clocks. For example, it is only possible to identify and correctly evaluate simultaneous recordings when all units are operating on the same time.

1. Enter the current date. Since the unit time is controlled by the internal clock, there is no need to enter the day of the week – it is added automatically.
2. Enter the current time or click the **Sync to PC** button to copy your computer's system time to the IP AutoDome.

Device time zone

Select the time zone in which your system is located.

Daylight saving time

The internal clock can switch automatically between normal and daylight saving time (DST). The unit already contains the data for DST switch-overs up to the year 2018. You can use these data or create alternative time saving data if required.



NOTICE!

If you do not create a table, there will be no automatic switching. When changing and clearing individual entries, remember that two entries are usually related to each other and dependent on one another (switching to summer time and back to normal time).

1. First check whether the correct time zone is selected. If it is not correct, select the appropriate time zone for the system, and click the **Set** button.
2. Click the **Details** button. A new window will open and you will see the empty table.
3. Select the region or the city that is closest to the system's location from the list field below the table.
4. Click the **Generate** button to generate data from the database in the unit and enter it into the table.
5. Make changes by clicking an entry in the table. The entry is selected.
6. Clicking the **Delete** button will remove the entry from the table.
7. Select other values from the list fields below the table to change the entry. Changes are made immediately.
8. If there are empty lines at the bottom of the table, for example after deletions, you can add new data by marking the row and selecting required values from the list fields.
9. Now click the **OK** button to save and activate the table.

Time server IP address

The IP AutoDome can receive the time signal from a time server using various time server protocols, and then use it to set the internal clock. The unit polls the time signal automatically once every minute.

Enter the IP address of a time server here.

Time server type

Select the protocol that is supported by the selected time server. Preferably, you should select the **SNTP server** as the protocol. This supports a high level of accuracy and is required for special applications and subsequent function extensions.

Select **Time server** for a time server that works with the protocol RFC 868.

10.11 Advanced Mode: Display Stamping

Various overlays or “stamps” in the video image provide important supplementary information. These overlays can be enabled individually and are arranged on the image in a clear manner.

Camera name stamping

This field sets the position of the camera name overlay. It can be displayed at the **Top**, at the **Bottom** or at a position of your choice that you can then specify using the **Custom** option. Or it can be set to **Off** for no overlay information.

1. Select the desired option from the list.
2. If you select the **Custom** option, additional fields are displayed where you can specify the exact position (**Position (XY)**).
3. In the **Position (XY)** fields, enter the values for the desired position.

Time stamping

This field sets the position of the time overlay. It can be displayed at the **Top**, at the **Bottom** or at a position of your choice that you can then specify using the **Custom** option. Or it can be set to **Off** for no overlay information.

1. Select the desired option from the list.
2. If you select the **Custom** option, additional fields are displayed where you can specify the exact position (**Position (XY)**).
3. In the **Position (XY)** fields, enter the values for the desired position.

Display milliseconds

If necessary, you can also display milliseconds. This information can be useful for recorded video images; however, it does increase the processor's computing time. Select **Off** if you do not need to display milliseconds.

Alarm mode stamping

Select **On** to display a text message overlay in the image in the event of an alarm. It can be displayed at a position of your choice that you can then specify using the **Custom** option. Or it can be set to **Off** for no overlay information.

1. Select the desired option from the list.
2. If you select the **Custom** option, additional fields are displayed where you can specify the exact position (**Position (XY)**).
3. In the **Position (XY)** fields, enter the values for the desired position.

Alarm message

Enter the message to be displayed in the image in the event of an alarm. The maximum text length is 31 characters.

Video watermarking

Choose **On** if you wish the transmitted video images to be “watermarked”. After activation, all images are marked with a green **W**. A red **W** indicates that the sequence (live or saved) has been manipulated.

10.12 Advanced Mode: Appearance

On this page you can adapt the appearance of the web interface and change the website language to meet your requirements. If necessary, you can replace the manufacturer's logo (top right) and the product name (top left) in the top part of the window with individual graphics.



NOTICE!

You can use either GIF or JPEG images. The file paths must correspond to the access mode (for example **C:\Images\Logo.gif** for access to local files, or **http://www.mycompany.com/images/logo.gif** for access via the Internet/Intranet).

When accessing via the Internet/Intranet, ensure that a connection is always available to display the image. The image file is not stored in the IP AutoDome.

Website language

Select the language for the user interface here.

Company logo

Enter the path to a suitable graphic if you want to replace the manufacturer's logo. The image file can be stored on a local computer, in the local network or at an Internet address.

Device logo

Enter the path to a suitable graphic if you want to replace the product name. The image file can be stored on a local computer, in the local network or at an Internet address.



NOTICE!

If you want to use the original graphics again, simply delete the entries in the **Company logo** and **Device logo** fields.

JPEG interval

You can specify the interval at which the individual images should be generated for the M-JPEG image on the **LIVEPAGE**.

10.13 Advanced Mode: LIVEPAGE Functions

On this page you can adapt the **LIVEPAGE** functions to your requirements. You can choose from a variety of different options for displaying information and controls.

1. Check the box for the items that are to be made available on the **LIVEPAGE**. The selected items are indicated by a check mark.
2. Check whether the required functions are available on the **LIVEPAGE**.

Transmit audio

The audio signals are sent in a separate data stream parallel to the video data, and so increase the network load. The audio data are encoded according to G.711 and require an additional bandwidth of approx. 80 kbps for each connection.

Lease time (s)

The lease time in seconds determines the time beyond which a different user is authorized to control the camera after no further control signals are received from the current user. After this time interval, the camera is automatically enabled.

Bilinx control

Next to the field for view control at the top left of the **LIVEPAGE**, an additional field is displayed for the special Bosch Security Systems Bilinx control.

Show alarm inputs

The alarm inputs are displayed next to the video image as icons along with their assigned names. If an alarm is active, the corresponding icon changes color.

Show relay outputs

Relay outputs are shown next to the video image as icons, along with their assigned names. If the relay is switched, the icon changes color.

Show VCA trajectories

The trajectories (motion lines of objects) from the video content analysis are displayed in the live video image if a corresponding analysis type is activated (see *Section 10.48 Advanced Mode: VCA Event triggered*, page 106).

Show VCA metadata

When the analysis function is activated, the additional information from the video content analysis (VCA) will be displayed in the live video image (see *Section 10.48 Advanced Mode: VCA Event triggered*, page 106). With the **MOTION+** analysis type, for example, the sensor fields in which motion is recorded will be marked with rectangles.

Show event log

The event messages are displayed along with the date and time in a field next to the video image.

Show system log

The system messages are displayed along with the date and time in a field next to the video image and provide information about establishing and ending connections, for example.

Allow snapshots

Here you can specify whether the icon for saving individual images should be displayed below the live image. Individual images can only be saved if this icon is visible.

Allow local recording

Here you can specify whether the icon for saving video sequences on the local memory should be displayed below the live image. Video sequences can only be saved if this icon is visible.

Path for JPEG and Video files

1. Enter the path for the storage location of individual images and video sequences that you can save from the **LIVEPAGE**.
2. If necessary, click **Browse** to find a suitable directory.

10.14 Advanced Mode: Logging

Save event log

Check this option to save event messages in a text file on your local computer. You can then view, edit and print this file with any text editor or the standard Office software.

File for event log

1. Enter the path for saving the event log here.
2. If necessary, click **Browse** to find a suitable directory.

Save system log

Check this option to save system messages in a text file on your local computer. You can then view, edit and print this file with any text editor or the standard Office software.

File for system log

1. Enter the path for saving the system log here.
2. If necessary, click **Browse** to find a suitable directory.

10.15 Advanced Mode: Picture Settings

You can set the video image of the camera to suit your requirements. The current video image is displayed in the small window next to the slide controls as confirmation. Your changes are effective immediately.

1. Move the slide control to the required position.
2. Click **Default** to reset all settings to their default value.

Contrast (0...255)

You can use this function to adapt the contrast of the video image to your working environment.

Saturation (0...255)

You can use this function to adjust the color saturation so as to make the reproduction of colors on your monitor as realistic as possible.

Brightness (0...255)

You can use this function to adapt the brightness of the video image to your working environment.

Low-pass filter (0...255)

You can use this function to filter very fine noise from the image. This reduces and optimizes the bandwidth necessary for image transmission over the network. The image resolution may be impaired.

The higher the value set with the slide control, the flatter the image signal. Check your setting in the image window next to the slide controls.

Also observe the processor load indicator that appears at the top of the window near the manufacturer's logo (see *Section 8.5.1 Changing the Network Settings, page 58*).

10.16 Advanced Mode: Encoder Profile

You can change the names and individual parameter values for the encoder profiles.

You can use this to adapt the video data transmission to the operating environment (for example network structure, bandwidth, data load).

Pre-programmed profiles are available, each giving priority to different perspectives. Below is a brief description of the factory default settings for the encoder profiles.

- **High resolution 1**
High quality, connections with the highest bandwidth, resolution 704 × 576/480 pixels
- **High resolution 2**
High quality, connections with high bandwidth, resolution 704 × 576/480 pixels
- **Low bandwidth**
High resolution, connections with low bandwidth, resolution 704 × 576/480 pixels
- **DSL**
DSL connections with 500 kbps, resolution 352 × 288/240 pixels
- **ISDN (2B)**
ISDN connections via two B-channels, resolution 352 × 288/240 pixels
- **ISDN (1B)**
ISDN connections via one B-channel, resolution 352 × 288/240 pixels
- **MODEM**
Analog modem connections with 20 kbps, resolution 352 × 288/240 pixels
- **GSM**
GSM connections with 9,600 baud, resolution 352 × 288/240 pixels

**CAUTION!**

Change the profiles only once you are fully familiar with all the configuration options. In the default setting, Stream 1 is transmitted for alarm connections and automatic connections. Bear this fact in mind when assigning the profile.

**NOTICE!**

All parameters combine to make up a profile and are dependent on one another. If you enter a setting that is outside the permitted range for a particular parameter, the nearest permitted value will be substituted when the settings are saved.

Profile name

You can enter a new name for the profile. The name is then displayed in the **Default profile** list field on the **Encoder Streams** page in the lists of selectable profiles.

Target data rate

You can limit the data rate for the IP AutoDome to optimize utilization of the bandwidth in your network. The target data rate should be set according to the desired picture quality for typical scenes with no excessive motion.

For complex images or frequent changes of image content due to frequent movements, this limit can be temporarily exceeded up to the value you enter in the **Maximum data rate** field.

Maximum data rate

This maximum data rate is not exceeded under any circumstances. Depending on the video quality settings for the I and P-frames, this fact can result in individual images being skipped. The value entered here must be at least 10% higher than the value entered in the **Target data rate** field. If the value entered here is too low, it will automatically be adjusted.

Encoding interval

The setting selected here determines the interval at which images are encoded and transmitted. The image rate in ips (images per second) is displayed next to the text field.

Video resolution

Here you can select the desired resolution for the video image. The following resolutions are available:

- **CIF**
352 × 288/240 pixels
- **4CIF/D1**
704 × 576/480 pixels

Expert Settings

You can use the expert settings to adapt the I-frame quality and the P-frame quality to specific requirements, if necessary. The setting is based on the H.264 quantization parameter (QP).

I-frame quality

This setting allows you to adjust the image quality of the I-frames. The basic setting **Auto** automatically adjusts the quality to the settings for the P-frame video quality. Alternatively, you can use the slide control to set a value between 9 and 51. The value **9** represents the best image quality with, if necessary, a lower frame refresh rate depending on the settings for the maximum data rate. A value of **51** results in a very high refresh rate and lower image quality.

P-frame quality

This setting allows you to adjust the maximum image quality of the P-frames. The basic setting **Auto** automatically adjusts to the optimum combination of movement and image definition (focus). Alternatively, you can use the slide control to set a value between 9 and 51. The value **9** represents the best image quality with, if necessary, a lower frame refresh rate depending on the settings for the maximum data rate. A value of **51** results in a very high refresh rate and lower image quality.

Default

Click **Default** to return the profile to the factory default values.

10.17**Advanced Mode: Encoder Streams**

The IP AutoDome simultaneously generates two data streams (Dual Streaming); you can select the relevant property for these here and connect them to an encoder profile, for example one for transmissions to the Internet and one for LAN connections.

Two settings with different encoder properties are available:

– H.264 BP+ (HW decoder)

Select this setting when using hardware decoders or the Divar XF digital video recorder.

CABAC: off

CAVLC: on

GOP structure: IP

I-frame distance: 15

Deblocking filter: on

– H.264 MP Low Latency

Select this setting when using software decoders, PTZ and for rapid movements in the images.

CABAC: on

CAVLC: off

GOP structure: IP

I-frame distance: 30

Deblocking filter: on

1. Select the required encoder properties and one of the encoder profiles for each data stream.
2. Click the **Preview** button. The preview screens for both data streams are shown.
3. Click the **1:1 Live View** button below the preview screen to open a new window with the original data stream and to check the image quality and the transmission rate.

Property

Select the required encoder properties for the relevant data stream here.

Default profile

Select the required encoder profile here. The properties of the profiles are defined on the **Encoder Profile** page (see *Section 10.16 Advanced Mode: Encoder Profile, page 78*).

JPEG stream

You can set up the separate JPEG stream in this area. These settings are independent of the H.264 settings. The resolution corresponds to the highest setting from the two data streams.

Max. frame rate

You can select the frame rate for transmitting the JPEG images.

Picture quality

This setting allows you to define the picture quality. Low quality requires a lower bandwidth in the network.

10.18 **Advanced Mode: Audio**

You can set the gain of the audio signals to suit your specific requirements. The current video image is shown in the small window next to the slide controls to help you check the audio source and improve assignments. Your changes are effective immediately.

If you connect via Web browser, you must activate the audio transmission on the **LIVEPAGE Functions** page (see *Section 10.13 Advanced Mode: LIVEPAGE Functions, page 76*). For other connections, the transmission depends on the audio settings of the respective system.

Audio

The audio signals are sent in a separate data stream parallel to the video data, and so increase the network load. The audio data are encoded according to G.711 and require an additional bandwidth of approx. 80 kbps for each connection. If you do not want any audio data to be transmitted, select **Off**.

Line In 1

You can set the line input gain. Make sure that the display does not go beyond the green zone during modulation.

10.19 **Advanced Mode: Camera Options**

10.20 **Camera Settings Group 1**

White Balance

Adjusts the color settings to maintain the quality of the white areas of the image.

- ATW: allows the camera to continuously adjust color reproduction.
- Indoor: white balance tracking for indoor use.
- Outdoor: white balance tracking for outdoor use.
- AWB Hold: places the ATW on hold and saves the color settings.
- Extended ATW (default): allows the camera to constantly adjust for optimal color reproduction.

Gain Control

Adjusts the automatic gain control (AGC). Automatically sets the gain to the lowest possible value needed to maintain a good picture.

- AGC (default): electronically brightens dark scenes, which may cause graininess in low light scenes.
- Fixed: no enhancement.

Max. Gain Level

Controls the maximum value the gain can have during AGC operation. To set the maximum gain level, type a value between 1 and 6 inclusive. The default setting is 4.

Sharpness

Adjusts the sharpness of the picture. To set the sharpness, type a value between 1 and 16 inclusive. The default setting is 12.

Sync. Mode

Selects the synchronization method for the camera.

- Line Lock: synchronizes the camera to AC power and eliminates picture roll in multi-camera systems.
- Internal (default): locks the power into the internal crystal.

Line Lock Delay

Adjusts the vertical line lock phase delay from 0° to 359°.

To set the Line Lock Delay, type a value, in degrees, between 0 (default) and 359 inclusive.

This setting optimizes the Line Lock mode to eliminate picture roll in multiphase power applications.

10.21

Camera Settings Group 2

Shutter Mode

- Off: turns the Auto SensUP Off.
- Auto SensUP (default): increases camera sensitivity by increasing the integration time on the CCD. This is accomplished by integrating the signal from a number of consecutive video frames to reduce signal noise.

Shutter

Adjusts the electronic shutter speed (AES). Controls the time period for which light is gathered by the collecting device. The default setting is 1/60 second.

Auto SensUp Maximum

Sets the Auto SensUp minimum value for the AutoDome. The Auto SensUp Min. value is the factor by which the sensitivity of the camera is increased. The default setting is 15x.

Night Mode (Day/Night models only)

Adjusts the filter operation of the camera.

- Off: activates day mode (color) and does not allow the camera to switch to the night mode.
- On: activates night mode to enhance lighting in low light scenes.
- Auto (default): allows the camera to set the Night Mode based on the light conditions of the scene.

Night Mode Threshold

Adjusts the level of light at which the camera automatically switches out of Night Mode (B/W) operation. 10 is earlier, 55 is later.

Night Mode Color

Switches an Auto IR filter in monochrome operation.

- On: color processing remains in effect while the camera is in night mode.
- Off (default): color processing is not in effect while the camera is in night mode.

10.22 Camera Settings Group 3

Backlight Compensation

Optimizes the video level for the selected area of the image. Parts outside this area may be underexposed or overexposed. Select On to optimize the video level for the central area of the image. The default setting is Off.

Stabilization

An algorithm that virtually eliminates camera shake in both the vertical and horizontal axes, resulting in exceptional image clarity. Select On to enable stabilization and Off to disable. The default setting is Off.

Wide Dynamic Range

Provides a sharper, more detailed image with outstanding accuracy in color reproduction. Select On to enable wide dynamic range and Off to disable. The default setting is Off.

10.23 Advanced Mode: Lens

10.24 Lens Settings Group 1

Auto Focus

Continuously adjusts the lens automatically to the correct focus for the sharpest picture.

- Spot (default): activates the Auto Focus feature after the camera stops moving. Once focused, Auto Focus is inactive until the camera is moved again.
- Constant: Auto Focus is always active.
- Manual: Auto Focus is inactive.

Auto Iris

Automatically adjusts the lens to allow the correct illumination of the camera sensor. This type of lens is recommended for use where there are low light or changing light conditions.

- Constant (default): camera constantly adjusts to varying light conditions (default).
- Manual: camera must be manually adjusted to compensate for varying light conditions.

Auto Iris Level

Increases or decreases brightness according to the amount of light. Type a value between 1 and 15, inclusive. The default setting is 8.

Iris Speed

Controls how fast the Iris will adjust the opening according to the illumination of the scene. Type a value between 1 and 10, inclusive. The default setting is 5.

Focus Speed

Controls how fast the Auto focus will readjust when the focus becomes blurred. Type a value between 1 and 8, inclusive. The default setting is 2.

Maximum Zoom Speed (200, 300, 500 models only)

Controls the zoom speed. The default setting is Fast.

10.25 Lens Settings Group 2

Digital Zoom

Digital zoom is a method of decreasing (narrowing) the apparent angle of view of a digital video image. It is accomplished electronically, without any adjustment of the camera's optics, and no optical resolution is gained in the process. Select Off to disable or On to enable this feature. The default setting is On.

Zoom Polarity

Capability to reverse the operation of the zoom button on the controller.

- Normal (default): zoom controls operate normally.
- Reverse: zoom controls are reversed.

Focus Polarity

- Normal (default): focus controls operate normally.
- Reverse: focus controls are reversed.

Iris Polarity

Capability to reverse the operation of the iris button on the controller.

- Normal (default): iris controls operate normally.
- Reverse: iris controls are reversed.

10.26 Advanced Mode: PTZ

10.27 PTZ Settings Group 1

Auto Pan Speed

Continuously pans the camera at a speed between right and left limit settings. Type a value between 1 and 60 (expressed in degrees), inclusive. The default setting is 30.

Standard Tour Period

Controls the waiting time until the dome moves to the next scene. Select a time period. The default is 5 seconds.

PTZ Fixed Speed

Controls the pan, tilt, zoom with a fixed speed value. Type a value between 1 and 15, inclusive. The default setting is 4.

Inactivity

Selects the time period the dome must be not controlled until the inactivity event will be executed.

- Off (default): camera remains on a current scene indefinitely.
- Scene 1: camera returns to Preset 1.
- Previous Aux: camera returns to the previous activity.

Inactivity Period

Determines the behavior of the dome when the control for dome is inactive. Select a time period from the pull-down list (3 sec. - 10 min.). The default setting is 2 minutes.

Auto Pivot

The Auto Pivot tilts the camera through the vertical position as the camera is rotated to maintain the correct orientation of the image. Set the Auto Pivot to On (default) to automatically rotate the camera 180° when following a subject traveling directly beneath the camera. To disable this feature, click Off.

10.28 PTZ Settings Group 2

Tracker

Automated motion tracking system. Select On (default) to enable the tracker or Off to disable this feature.

Camera Height

The camera height is a straight vertical height in respect to the surface that you are tracking. Use the slider bar to select the camera's height on a scale of 8-100. The default setting is 12.

Orientation

Reverses the image 180° (ideal when mounting upside down). Set the orientation to Normal (default) or Inverted.

Freeze Frame

Select On (default) to freeze the image while the AutoDome moves to a predetermined scene position.

AutoTracker Sensitivity

Use the slider bar to select the sensitivity level on a scale of 0-20. The default setting is 0.

AutoTracker Timeout

When On, AutoTrack “gives up” after the Timeout Period if tracking in a confined area (for example a tree, a flag, etc). Select a timeout period; from 30 seconds to 1800 seconds (30 minutes).

10.29 Advanced Mode: Display

10.30 Display Settings Group 1

Title OSD

Controls how the camera displays the on-screen Sector and Scene titles.

- Off: no on-screen titles.
- On: always displays on-screen titles.
- Momentary (default: on-screen titles displayed for a few seconds, then hides the titles).

Camera OSD

Controls how the camera displays response information on the screen, such as Digital Zoom, Iris Open /Close and Focus Near/Far. Click the On (default) radio button to display the camera response information. Click Off to disable this feature.

Language

Select a language in which the OSD displays the titles and the response information. The default setting is English.

Display Position

To set the Display Position type a value between 1 and 16, inclusive, or use the slide control to set this value. The value zero (default) sets the position at the top-center of the on-screen display, while a value of 16 sets the position at the bottom-center of the on-screen display.

OSD Brightness

Adjusts the brightness for the OSD. The value 0 is the darkest display and 10 is the brightest display. To set the OSD Brightness, type a value between 0 and 10, inclusive, or use the slide control to set this value. The default setting is 7.

10.31

Display Settings Group 2

Scene

The AutoDome can store up to 99 preset scenes and this section allows you to apply a title for the scene and to indicate if the scene can be a part of a preset tour. Click Download to get the current list of defined Scenes.

Scene

Switches between scenes. Type a value between 1 and 99, inclusive, to identify the scene or use the slide control to select a scene.

Title

16-character scene name that is displayed when the Dome moves to a scene (must be enabled or disabled via the Title OSD). Type an alphanumeric title for the scene selected above, up to 16 characters long.

In Tour

Determines if the scene is included in a preposition tour. Click the Yes radio button to include this scene as part of a preset tour.

Sector

The AutoDome can store up to 16 preset sectors and this section allows you to apply a title for the sector and to indicate if the sector can be a part of a preset tour. Click Download to get the current list of defined Sectors.

Title

16-character scene name that is displayed when the Dome moves to a scene (must be enabled or disabled via the Title OSD). Type an alphanumeric title for the sector selected above, up to 16 characters long.

Blanking

Cuts off the electron beam in a camera pickup device or picture tube during the retrace period. It is a signal that is composed of recurrent pulses at line and field frequencies. It is intended primarily to make the retrace on a pickup device or picture tube invisible. Select Off to hide the sector from the on-screen display. To reveal the sector, select On from the drop-down list.

10.32 Display Settings Group 3

Custom Tour Period

Defines the length of time for a custom camera tour. Select the time interval that the AutoDome waits before moving to the next scene in the tour. The default setting is 5 sec.

Custom Tour

Allows you to define a custom camera tour by ordering defined scenes to your specifications.

1. Set the custom tour period by selecting a time period from the drop-down list.
2. Click Download to load the preset scenes. The Available Scenes box displays the preset scene titles, if defined. If no title is defined, the box displays the default scene title.
3. To define a custom tour:
 - a. Select a scene in the Available Scenes box.
 - b. Click Left Arrow to add the scene.
 - c. Continue to add scenes.
 - d. To remove a scene, select the scene from the Added Scenes box and click the Right Arrow.
4. To reorder the scenes, select a scene and click the Up or Down arrows.
5. Click Upload to load the selected scenes to the camera.

10.33 Advanced Mode: Alarm

10.34 Input Options

The AutoDome provides seven alarm inputs. Each input can be activated by dry contact devices such as pressure pads, door contacts and similar devices. Options include two types of physical inputs:

- Inputs 1-7: define the type of physical inputs.
Only alarm inputs 1 and 2 provide tamper detection for breaks or shorts in an alarm circuit.
- Inputs 8-12: virtual alarm inputs used to define input commands used in a rule definition. The virtual alarm events (Inputs 8 through 12) can be triggered by one of the following events:
 - None: no trigger event is selected.
 - Aux On: triggers alarms with one respective Aux On command.
 - Aux Off: triggers alarms with one respective Aux Off command.
 - Shot: triggers alarms when the camera is set to one pre-position.
 - Tracking: Alarm input option that turns the tracker on when the alarm is activated.
 - Motion Detection: triggers alarms when the camera senses motion.
 - IVA/MOTION+: triggers alarms when IVA is activated.
- Click the Alarm States link in the left pane to view a status of each alarm.

Type

To define the type of physical input:

1. Select Input Option 1 through 7 from the left pane.
2. Select one of the following alarm inputs:
 - N.O. (Normally Open, dry contact).
 - N.C. (Normally Closed, dry contact).
 - N.C.S. (Normally Closed Supervised contact, available only for alarm inputs 1 and 2).
 - N.O.S. (Normally Open Supervised contact, available only for alarm inputs 1 and 2).
3. Type an alphanumeric name for the input, up to 32 characters.
4. Check Activate Trigger to enable the alarm input to trigger an alarm email and a connection.

Rule Definition

Select Input Option 8 through 12 from the left pane, then select a type:

- None: no trigger event is selected.
- Aux On: triggers alarms with one respective Aux On command.
- Aux Off: triggers alarms with one respective Aux Off command.
- Shot: triggers alarms when the camera is set to one pre-position.
- Tracking: Alarm input option that turns the tracker on when the alarm is activated.
- Motion Detection: triggers alarms when the camera senses motion.
- IVA/MOTION+: triggers alarms when IVA is activated.

10.35**Output Options**

Allows you to define the following physical outputs and keyboard commands for use in a rule:

- Output Options 1-3: defines a physical output. The default setting is N.O.
- Output Option 4 (Alarm Relay): fixed output which is available for use in a rule.
- Output Options 5-12: used to define a command output for use in a rule. The default setting is None. Additional options include:
 - None: no defined command.
 - Aux On: defines a standard or custom keyboard ON command (command numbers 1-99).
 - Aux Off: defines a standard or custom keyboard OFF command (command numbers 1-99).
 - Shot: defines a preset scene from shot 1-99.
 - OSD: specifies the on-screen display.
 - Transmit: transmits a message back to the head end (available only with Bilinx and IP models).
 - Tracking: Alarm input option that turns the tracker on when the alarm is activated.
- Click the Alarm States link in the left pane to view a status of each alarm.

Physical Output

To define a physical output:

1. Select Output Option 1 through 3 from the left pane.
2. Select an alarm output:
 - N.O. (Normally Open, dry contact).
 - N.C. (Normally Closed, dry contact).
3. Type an alphanumeric name for the output, up to 32 characters.

Alarm Relay

To define an alarm relay:

1. Select Output Option 4 from the left pane.
2. Type an alphanumeric name for the output, up to 32 characters.

Rule Definition

Select Output Option 5 through 12 from the left pane, then select a type:

- None: no trigger event is selected.
- Aux On: triggers alarms with one respective Aux On command.
- Aux Off: triggers alarms with one respective Aux Off command.
- Shot: triggers alarms when the camera is set to one pre-position.
- Tracking: Alarm input option that turns the tracker on when the alarm is activated.
- Motion Detection: triggers alarms when the camera senses motion.

10.36 Alarm Rules

The 300 and 500i Series AutoDome feature a powerful alarm rule engine. In its simplest form, an alarm rule can define which input(s) activate which output(s). Basically, an alarm rule allows you to customize an AutoDome to automatically respond to different alarm inputs. In its more complex form, a rule can be programmed to take any combination of input(s) and keyboard command(s) to perform a dome function. There are numerous combinations of alarm inputs and outputs that can be programmed into 12 alarm rules.

Creating Alarm Rules

Up to four (4) input and output events can be included in a single rule. However, each input and output must be true for the alarm's rule to be valid and enabled. To configure an alarm rule, do the following:

1. Open the IP AutoDome LIVEPAGE, then click the Settings tab.
2. Click Alarm from the left pane, then click Alarm Rules. Select an Alarm Rule. The IP AutoDome displays the Alarm Rule screen.

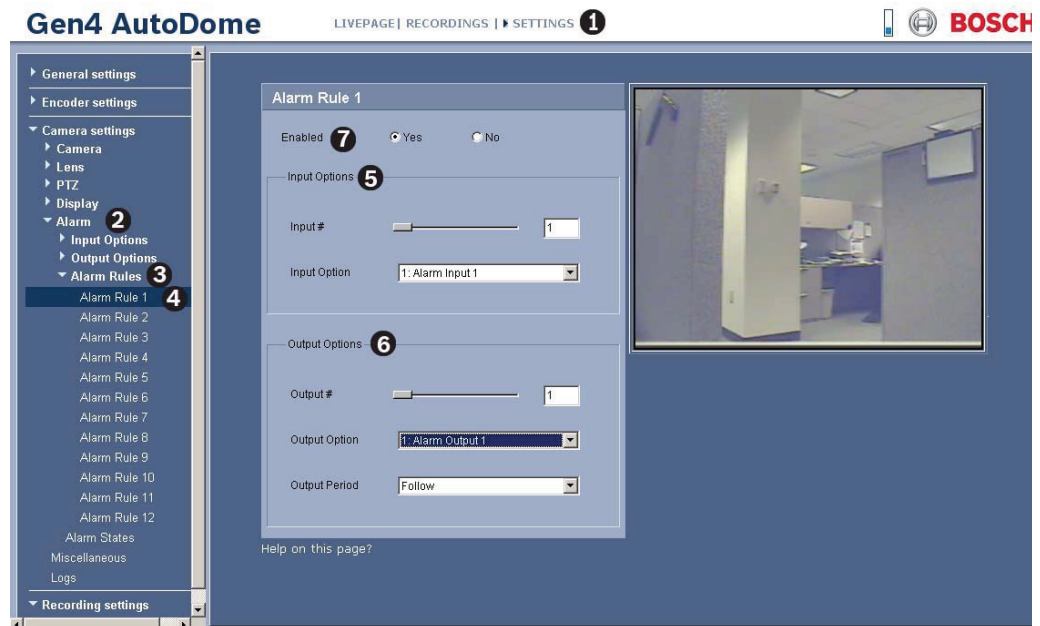


Figure 10.1 Alarm Rules

3. Move the slider bar to select a number between 1-4, inclusive.
4. Select the appropriate Input Option. This list displays Input Options 1 through 7 only if these options were previously configured.
5. Move the slider bar to select a number between 1-4, inclusive.
6. Select the appropriate Output Option:
 - None
 - Output Options 1-3 (only if these options were previously configured).
 - Alarm Relay (Output Option 4)
 - OSD (on-screen display)
 - Transmit
7. Select an Output Period:
 - Follow: activates the alarm following the alarm rule.
 - Time Increment: activates the alarm following a predefined time increment.
 - Latched: keeps the alarm active until it is acknowledged.
8. Click the Yes radio button to enable the alarm.

Basic Alarm Rule Example

The following is an example for setting up a basic door alarm rule to:

1. Flash an OSD message (**ALARM 1**) on the display when the alarm is triggered.
2. Move the AutoDome camera to a saved position (for this example use Shot 7).
3. Transmit a Bilinx signal over the coax cable to the headend system, such as an Allegiant, to trigger an alarm response.

The sequence to program the above alarm rule is as follows:

1. Open the IP AutoDome LIVEPAGE, then click the Settings tab.
2. Click the Camera Settings link, click Alarm, expand Input Options, and click Input Options 1. The IP AutoDome displays the input Options 1 screen.
 - a. Ensure the drop-down list for Type is set to Alarm Input 1.
 - b. Click the drop-down list for Alarm Input and set to **N.O.** (normally open). This setting is the default for Input 1. Additional inputs include:
 - c. N.C. (Normally Closed, dry contact)
 - d. N.C.S. (Normally Closed Supervised contact, available only for alarm inputs 1 and 2)
 - e. N.C.O. (Normally Open Supervised contact, available only for alarm inputs 1 and 2)

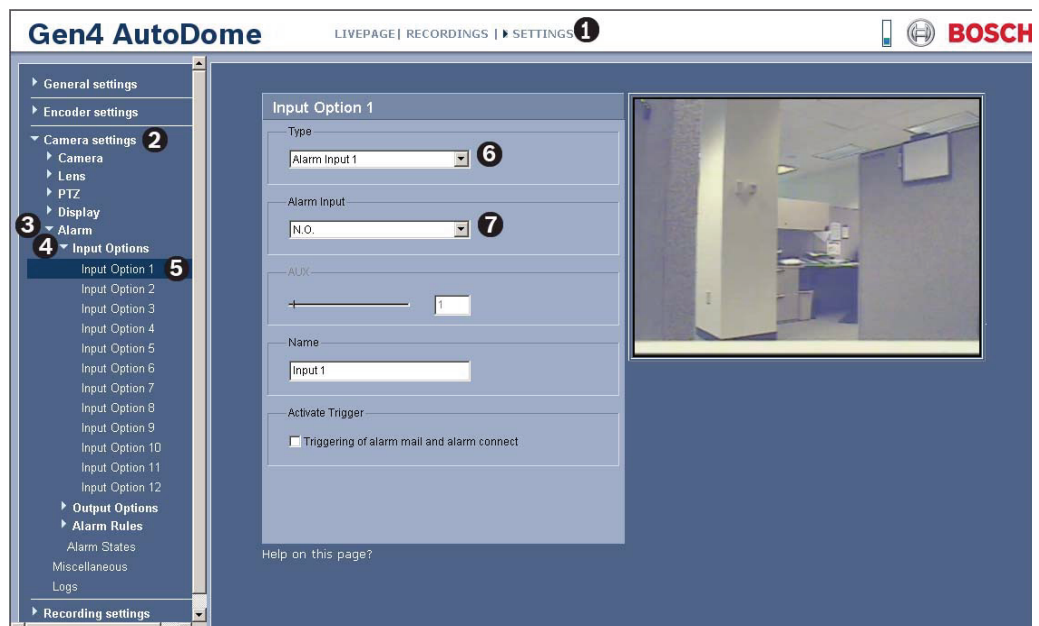


Figure 10.2 Input Options Settings Example

3. Close the Input Options list, then expand the Output Options list. Select Output Option 5.
 - Ensure Output 5 is set to **OSD** (default setting for Output 5).

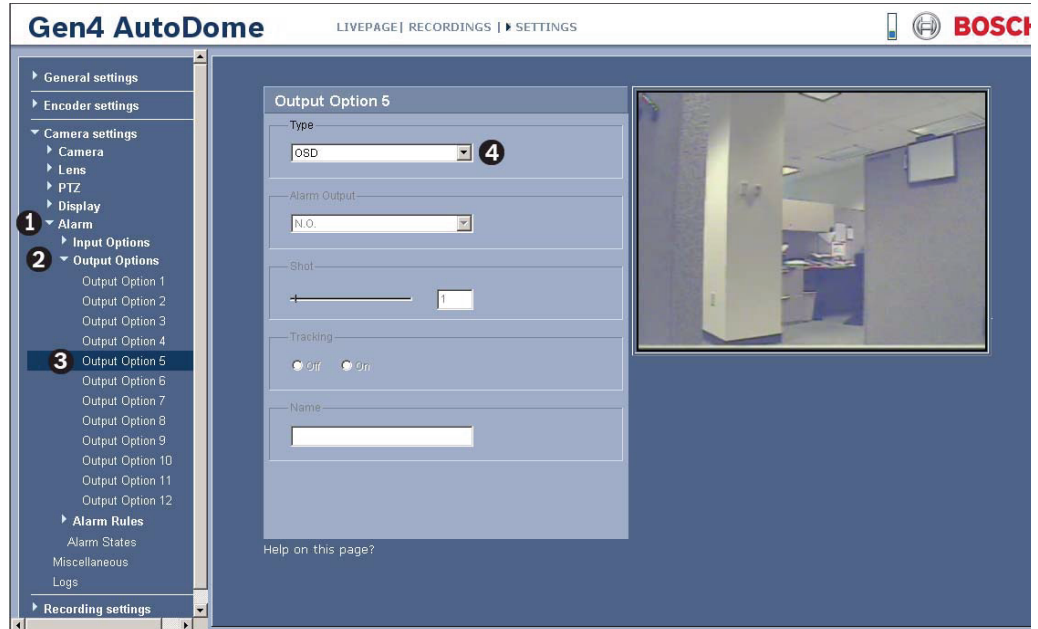


Figure 10.3 Output Option 5 Example

4. Select Output Option 6.
 - a. Click the Type drop-down list and select **Shot**.
 - b. Move the slider bar or type the number **7** in the Shot field.

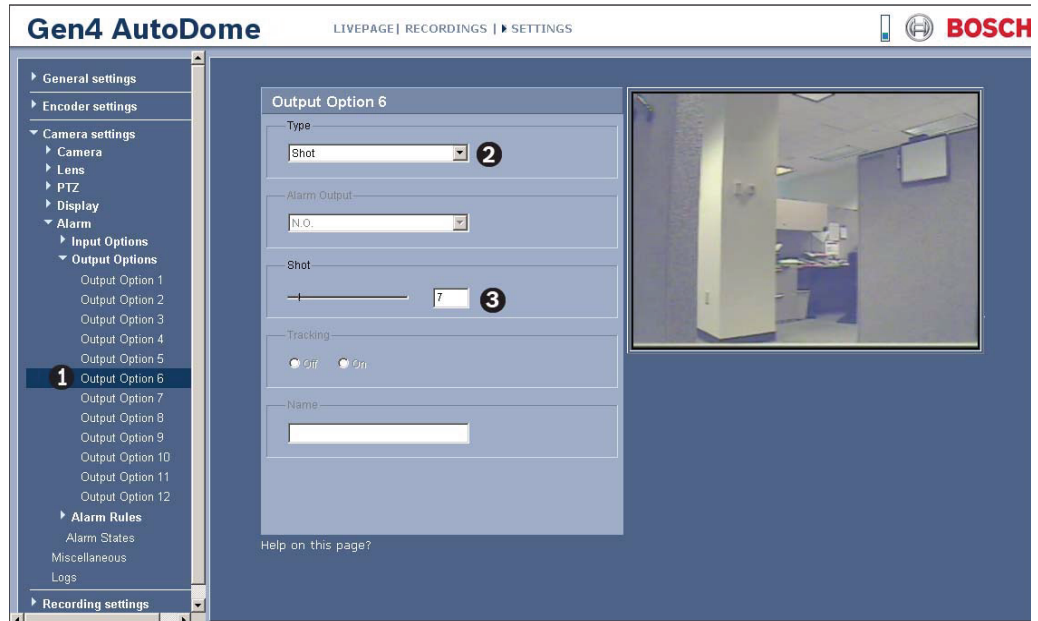


Figure 10.4 Output Option 6 Example

5. Select **Output Option 7**.
6. Click the Type drop-down list and select **Transmit**.

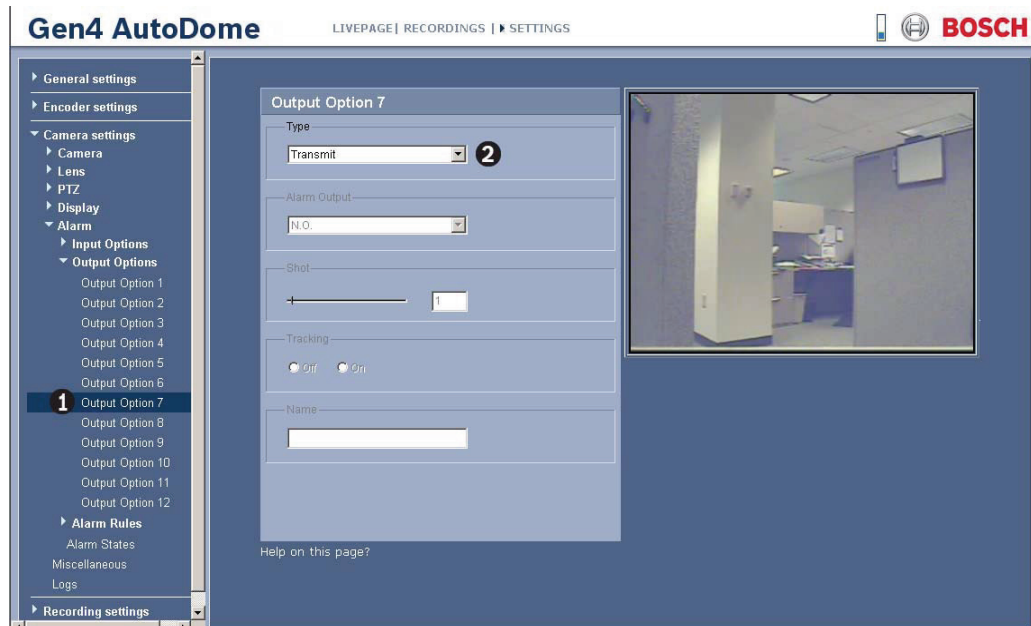


Figure 10.5 Output Option 7 Example

7. Close the Output Options list, click **Alarm Rules** and then click **Alarm Rule 1**.
 - a. Move the slider bar or type the number **1** in the Input # field.
 - b. Click the **Input Option** drop-down list and select **1: Alarm Input 1**.
 - c. Move the slider bar or type the number **1** in the Output # field.
 - d. Click the **Output Option** drop-down list and select **5: OSD**.

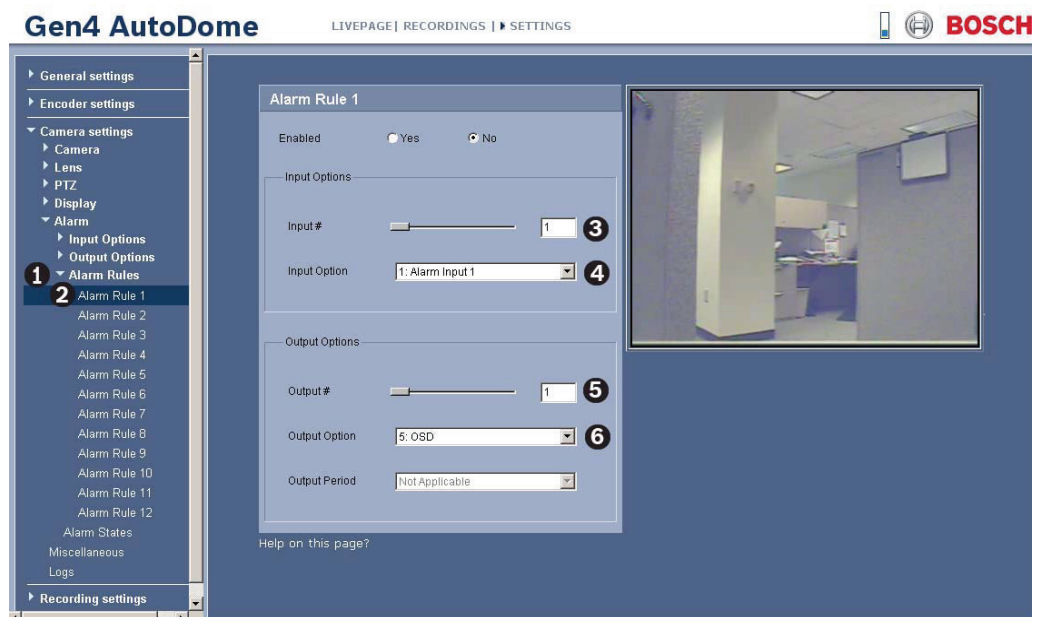


Figure 10.6 Alarm Rule 1 Example

8. Within the Output Options, do the following:
 - a. Move the slider bar or type the number **1** in the Output # field.
 - b. Click the Output Option drop-down list and select **5: OSD**.

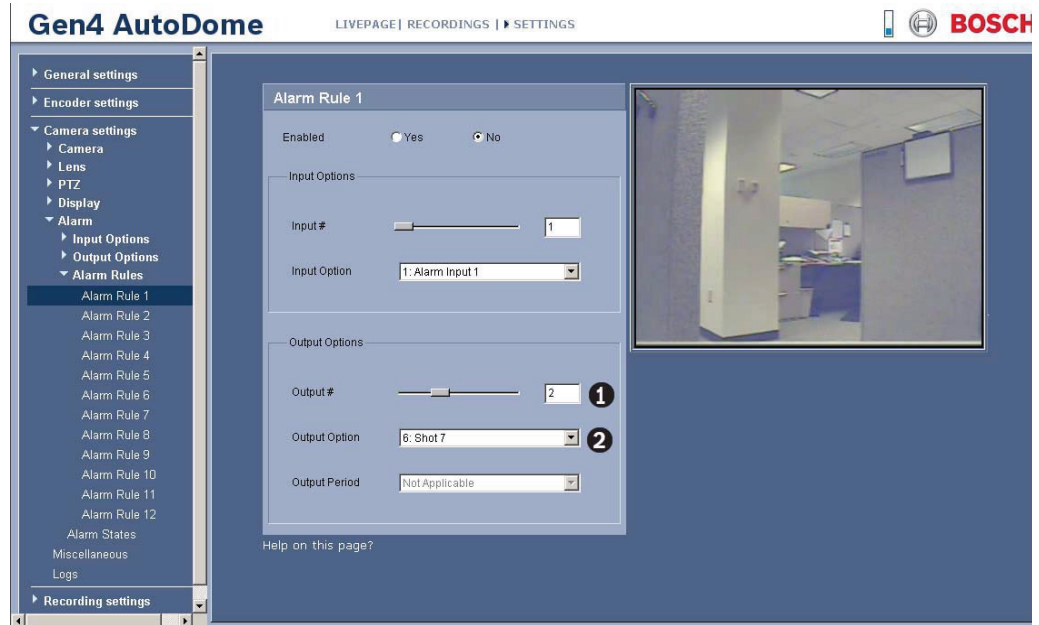


Figure 10.7 Alarm Rule 1 Example

9. Within the Output Options, do the following:
 - a. Move the slider bar or type the number **3** in the Output # field.
 - b. Click the **Output Option** drop-down list and select **7: Transmit**.
 - c. Click the **Output Period** drop-down list and select **3 sec**.
 - d. Click the **Yes** radio button to enable Alarm Rule 1.

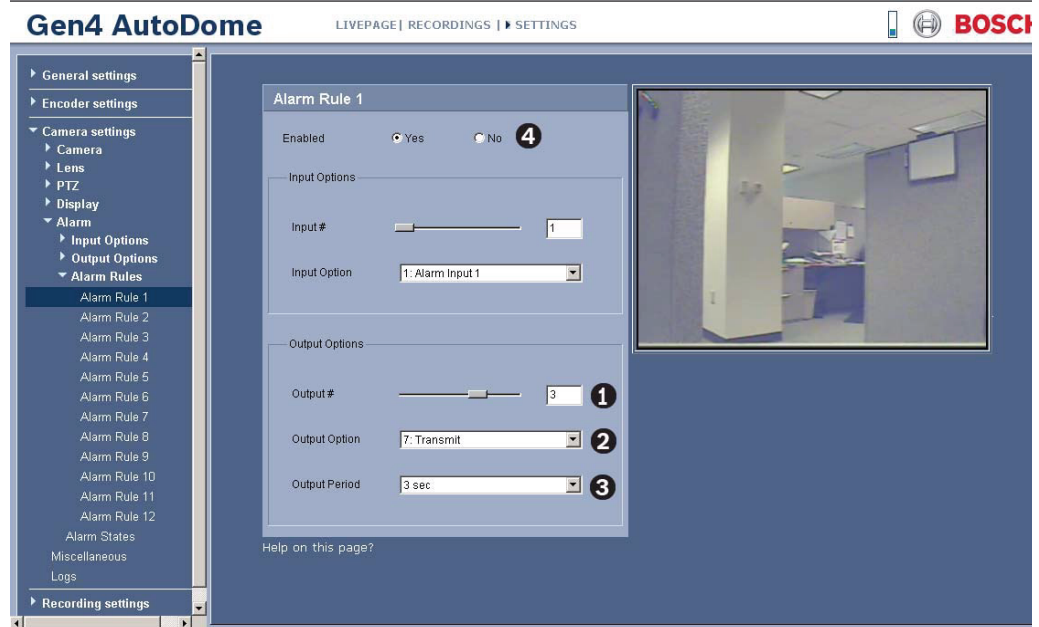


Figure 10.8 Alarm Rule 1 Example

Advanced Alarm Rule Example using AutoTrack

This example explains how to set an alarm rule that moves the camera to a preset position and then activates the AutoTrack feature to track an intruder after an alarm is triggered.

1. Open the IP AutoDome LIVEPAGE, then click the Settings tab.
2. Click the **Camera Settings** link, click **Alarm**, then click **Output Options**.
3. Click **Output Option 5** under the Output Options group.
4. Select **Tracking** from the Type drop-down list.
5. Click **Output Option 6**.
6. Select **Shot** from the Type drop-down list.
7. Type the number **1** or use the slide bar to specify shot number **1**. (Shot numbers must be set prior to configuring an alarm rule. See *Section 8.6.1 Entering a Keyboard Control Command, page 62*, for instructions).

The AutoDome moves to this preposition when the alarm rule is true.

8. Click **Alarm Rule** link and then click **Alarm Rule 1**.
9. Click the **Yes** radio button to enable the rule.
10. Use the slider bar to select **1** for the Input option.
11. Select **Alarm Input 1** from the Input Option drop-down list.
12. Ensure that the Output number is set to **1**.
13. Select **6: Shot 1** from the Output Options drop-down list.
This option instructs the AutoDome to move to pre-position shot 1 when Input 1 is true.
14. Move the Output slider bar to output **2**.
15. Select **5:Tracking** from the Output Option drop-down list.
This option instructs the AutoDome to activate the AutoTrack feature after the input alarm is triggered and after the AutoDome moves to pre-position 1.
16. Select **5 sec** from the Output Period drop-down list.
This option instructs the AutoDome to turn off the AutoTrack feature after five seconds from when the tracked object is out of view.

10.37

Miscellaneous

Password

A password controls access to locked command menus. Passwords are four (4) digits in length. Two password numbers are reserved:

- 0000: Enables security and requires a user to enter the unlock command OFF-90-ENTER (from a keyboard). This password is the default.
- 9999: Disables all security and allows all users to access locked commands.

To set a password, enter a number between 0000 and 9999, inclusive.

Address

Allows the appropriate dome to be operated via the numerical address in the control system. Type a number between 0000 and 9999, inclusive, to identify the camera.

Baud Rate

Sets the speed at which data is transmitted, measured in bytes-per-second (BPS). The default is 9600.

Auto Baud

Select Yes to instruct the camera to accept baud rates from 2400 to 57600. The default is On.

Audio/BiPhase

Use this option to disable the Audio and to activate the Biphase communication. The default is Biphase.

Reset to Factory Defaults

Click the Reset button to reset the miscellaneous settings to the default settings:

- Password: 0000
- Address: 9999
- Baud Rate: 9600
- AutoBaud: On
- Audio/Biphase: Biphase

10.38

Logs

To save the log file information:

1. Click Download to obtain the log information.
2. Click Save.
3. Navigate to the directory in which you want to store the log information.
4. Type a name for the log file and click Save.

10.39

Advanced Mode: Storage Management

You can record the images from the camera connected to the IP AutoDome on an appropriately configured iSCSI system.

For long-term, authoritative images, it is essential that you use an appropriately sized iSCSI system.

It is also possible to let the VRM Video Recording Manager control all recording when accessing an iSCSI system. This is an external program for configuring recording tasks for video servers. For further information please contact your local customer service at Bosch Security Systems.

Device manager

If you activate the **VRM** option in this screen, the VRM Video Recording Manager will manage all recording and you will not be able to configure any further settings here.



CAUTION!

Activating or deactivating VRM causes the current settings to be lost; they can only be restored through reconfiguration.

Recording media

Select the required recording media here so that you can then activate them and configure the recording parameters.

iSCSI Media

If you want to use an **iSCSI system** as a recording medium, you must set up a connection to the required iSCSI system and set the configuration parameters.



NOTICE!

The iSCSI storage system selected must be available on the network and completely set up. Amongst other things, it must have an IP address and be divided into logical drives (LUN).

1. Enter the IP address of the required iSCSI destination in the **iSCSI IP address** field.
2. If the iSCSI destination is password protected, enter this into the **Password** field.
3. Click the **Read** button. The connection to the IP address will be established. In the **Storage overview** field, you can see the corresponding logical drives.

Local Media

The supported local recording media are displayed in the **Storage overview** field.

Activating and Configuring Storage Media

The storage overview displays the available storage media. You can select individual media or iSCSI drives and transfer these to the **Managed storage media** list. You can activate the storage media in this list and configure them for storage.



CAUTION!

Each storage medium can only be associated with one user. If a storage medium is already being used by another user, you can decouple the user and connect the drive with the IP AutoDome. Before decoupling, make absolutely sure that the previous user no longer needs the storage medium.

-
1. In the **Recording media** section, click the **iSCSI Media** and **Local Media** tabs to display the applicable storage media in the overview.
 2. In the **Storage overview** section, double-click the required storage medium, an iSCSI LUN or one of the other available drives. The medium is then added to the **Managed storage media** list. In the **Status** column, newly added media are indicated by the status **Not active**.
 3. Click the **Set** button to activate all media in the **Managed storage media** list. In the **Status** column, these are indicated by the status **Online**.
 4. Check the box in the **Rec. 1** or **Rec. 2** column to specify which data stream should be recorded on the storage media selected. **Rec. 1** stores Stream 1, **Rec. 2** stores Stream 2. This means that you can record the standard data stream on a hard drive and record alarm images on another drive, for example.
 5. Check the boxes for the **Overwrite older recordings** option to specify which older recordings can be overwritten once the available memory capacity has been used. **Recording 1** corresponds to Stream 1, **Recording 2** corresponds to Stream 2.



CAUTION!

If older recordings are not allowed to be overwritten when the available memory capacity has been used, the recording in question will be stopped. You can specify limitations for overwriting old recordings by configuring the retention time (see *Section 10.41 Advanced Mode: Retention Time, page 97*).

Formatting Storage Media

You can delete all recordings on a storage medium at any time.



CAUTION!

Check the recordings before deleting and back up important sequences on the computer's hard drive.

-
1. Click a storage medium in the **Managed storage media** list to select it.
 2. Click the **Edit** button below the list. A new window will open.
 3. Click the **Formatting** button to delete all recordings in the storage medium.
 4. Click **OK** to close the window.

Deactivating Storage Media

You can deactivate any storage medium from the **Managed storage media** list. It is then no longer used for recordings.

1. Click a storage medium in the **Managed storage media** list to select it.
2. Click the **Remove** button below the list. The storage medium is deactivated and removed from the list.

10.40 Advanced Mode: Recording Profiles

You can define up to ten different recording profiles. You will then use these recording profiles in the recording scheduler, where they are linked with the individual days and times (see *Section 10.42 Advanced Mode: Recording Scheduler, page 97*).



NOTICE!

You can change or add to the recording profile description on the tabs on the **Recording Scheduler** page (see *Section Time periods, page 98*).

1. Click one of the tabs to edit the corresponding profile.
2. If necessary, click the **Default** button to return all settings to their default values.
3. Click the **Copy Settings** button if you want to copy the currently visible settings to other profiles. A new window will open and you can select the profiles in which you want to copy the settings.
4. For each profile, click the **Set** button to save the settings in the unit.

Stream profile settings

You can select the profile setting that is to be used for each data stream in the event of recordings. This selection is independent of the selection for live data stream transmission (see *Section 10.17 Advanced Mode: Encoder Streams, page 80*).

The properties of the profiles are defined on the **Encoder Profile** page (see *Section 10.16 Advanced Mode: Encoder Profile, page 78*).

Recording includes

You can specify whether, in addition to video data, audio data and metadata (for example alarms, VCA data and serial data) should also be recorded. Including metadata could make subsequent searches of recordings easier but it requires additional memory capacity.



CAUTION!

Without metadata, it is not possible to include video content analysis in recordings.

Standard recording

Here you can select the mode for standard recordings.

If you select **Continuous**, the recording proceeds continuously. If the maximum memory capacity is reached, older recordings will automatically be overwritten. If you select the **Pre-alarm** option, recording will only take place in the pre-alarm time, during the alarm and during the set post-alarm time.

If you select **Off**, no automatic recording takes place.



CAUTION!

You can specify limitations for overwriting older recordings in **Continuous** mode by configuring the retention time (see *Section 10.41 Advanced Mode: Retention Time, page 97*).

Stream

Here you can select the data stream that is to be used for standard recordings. You can select the data stream for alarm recordings separately and independently of this (see *Section Alarm stream, page 97*).

Pre-alarm time

You can select the required pre-alarm time from the list field.

Post-alarm time

You can select the required post-alarm time from the list field.

Alarm stream

Here you can select the data stream that is to be used for alarm recordings. You can select the data stream for standard recordings separately and independently of this (see *Section Stream, page 96*).

with encoding interval from profile

You can select an alternative encoding interval for the data stream for alarm recordings. Otherwise the encoding interval that corresponds to the default profile allocated to the data stream is used (see *Section 10.17 Advanced Mode: Encoder Streams, page 80*).

Alarm input / Motion/Audio alarm / Video loss alarm

Here you can select the alarm sensor that is to trigger a recording.

**NOTICE!**

The alarm inputs are configured and activated on the **Alarm Inputs** page (see *Section 10.34 Input Options, page 86*).

The numbering of the checkboxes for the alarm inputs corresponds to the labeling of the alarm inputs on the IP AutoDome.

The motion alarm is configured and activated on the **VCA** page (see *Section 10.45 Advanced Mode: VCA, page 101 onwards*).

Virtual alarm

Here you can select the virtual alarm sensors that are to trigger a recording, via RCP+ commands or alarm scripts, for example.

**NOTICE!**

For more information, please see the **Alarm Task Script Language** document and the RCP+ documentation. These documents can be found on the product CD supplied.

10.41**Advanced Mode: Retention Time**

You can specify the retention times for recordings. If the available memory capacity of a medium has been used, older recordings are only overwritten if the retention time entered here has expired.

**NOTICE!**

Make sure that the retention time corresponds with the available memory capacity. A rule of thumb for the memory requirement is as follows: 1 GB per hour retention time with 4CIF for complete frame rate and high image quality.

Recording 1 / Recording 2

Enter the required retention time in hours or days for each recording. **Recording 1** corresponds to Stream 1, **Recording 2** corresponds to Stream 2.

10.42 Advanced Mode: Recording Scheduler

The recording scheduler allows you to link the created recording profiles with the days and times at which the camera's images are to be recorded in the event of an alarm.

You can link any number of 15-minute intervals with the recording profiles for each day of the week. Moving the mouse cursor over the table displays the time below it. This aids orientation.

In addition to the normal weekdays, you can define holidays that are not in the standard weekly schedule on which recordings are to apply. This allows you to apply a schedule for Sundays to other days with dates that fall on varying weekdays.

1. Click the profile you want to link in the **Time periods** field.
2. Click in a field in the table, hold down the mouse button and drag the cursor over all the periods to be assigned to the selected profile.
3. Use the right mouse button to deselect any of the intervals.
4. Click the **Select All** button to link all time intervals to the selected profile.
5. Click the **Clear All** button to deselect all of the intervals.
6. When you are finished, click the **Set** button to save the settings in the unit.

Holidays

You can define holidays that are not in the standard weekly schedule on which recordings are to apply. This allows you to apply a schedule for Sundays to other days with dates that fall on varying weekdays.

1. Click the **Holidays** tab. Any days that have already been selected will be shown in the table.
2. Click the **Add** button. A new window will open.
3. Select the desired date from the calendar. You can select several consecutive calendar days by holding down the mouse button. These will later be displayed as a single entry in the table.
4. Click **OK** to accept the selection. The window will close.
5. Assign the individual holidays to the recording profiles, as described above.

Deleting Holidays

You can delete holidays you have defined yourself at any time.

1. Click the **Delete** button. A new window will open.
2. Click the date you wish to delete.
3. Click **OK**. The item will be deleted from the table and the window will close.
4. The process must be repeated for deleting additional days.

Time periods

You can change the names of the recording profiles.

1. Click a profile and then the **Rename** button.
2. Enter your chosen name and then click the **Rename** button again.

Activating the Recording

After completing configuration you must activate the recording scheduler and start the recording. Once recording is underway, the **Recording Profiles** and **Recording Scheduler** pages are deactivated and the configuration cannot be modified.

You can stop the recording activity at any time and modify the settings.

1. Click the **Start** button to activate the recording scheduler.
2. Click the **Stop** button to deactivate the recording scheduler. Running recordings are interrupted and the configuration can be changed.

Recording status

The graphic indicates the recording activity of the IP AutoDome. You will see an animated graphic while recording is taking place.

10.43 Advanced Mode: Recording Status

Certain details on the recording status are displayed here for information purposes. You cannot change any of these settings.

10.44 Advanced Mode: Alarm Connections

You can select how the IP AutoDome responds to an alarm. In the event of an alarm, the unit can automatically connect to a pre-defined IP address. You can enter up to ten IP addresses to which the IP AutoDome will connect in sequence in the event of an alarm, until a connection is made.

Connect on alarm

Select **On** so that the IP AutoDome automatically connects to a predefined IP address in the event of an alarm.

By setting **Follows input 1** the unit maintains the connection that has been automatically established for as long as an alarm exists on alarm input 1.

**NOTICE!**

In the default setting, Stream 2 is transmitted for alarm connections. Bear this fact in mind when assigning the profile (see *Section 10.16 Advanced Mode: Encoder Profile, page 78*).

Number of destination IP address

Specify the numbers of the IP addresses to be contacted in the event of an alarm. The unit contacts the remote stations one after the other in the numbered sequence until a connection is made.

Destination IP address

For each number, enter the corresponding IP address for the desired remote station.

Destination password

If the remote station is password protected, enter the password here.

In this page, you can save a maximum of ten destination IP addresses and hence up to ten passwords for connecting to remote stations. If connections to more than ten remote stations are to be possible, for example when initiating connections via higher-ranking systems such as VIDOS or Bosch Video Management System, you can store a general password here. The IP AutoDome can use this general password to connect to all remote stations protected with the same password. In this case, proceed as follows:

1. Select **10** from the **Number of destination IP address** list field.
2. Enter the address **0.0.0.0** in the **Destination IP address** field.
3. Enter your chosen password in the **Destination password** field.
4. Define this password as the **user** password for all remote stations to which a connection is to be possible.

**NOTICE!**

If you enter the destination IP address 0.0.0.0 for destination 10, this address will no longer be used for the tenth attempt at automatic connection in the event of an alarm. The parameter is then used only to save the general password.

Video transmission

If the unit is operated behind a firewall, **TCP (HTTP port)** should be selected as the transfer protocol. For use in a local network, select **UDP**.

**CAUTION!**

Please note that in some circumstances, a larger bandwidth must be available on the network for additional video images in the event of an alarm, in case Multicast operation is not possible. To enable Multicast operation, select the **UDP** option for the **Video transmission** parameter here and on the **Network** page (see *Page 110*).

Remote port

Depending on the network configuration, select a browser port here. The ports for HTTPS connections will be available only if the **On** option is selected in the **SSL encryption** parameter.

Video output

If you know which unit is being used as the receiver, you can select the analog video output to which the signal should be switched. If the destination unit is unknown, it is advisable to select the **First available** option. In this case, the image is placed on the first free video output. This is an output on which there is no signal. The connected monitor only displays images when an alarm is triggered. If you select a particular video output and a split image is set for this output on the receiver, you can also select from **Decoder** the decoder in the receiver that is to be used to display the alarm image.

**NOTICE!**

Refer to the destination unit documentation concerning image display options and available video outputs.

Decoder

Select a decoder of the receiver to display the alarm image. The decoder selected has an impact on the position of the image in a split screen. For example, you can specify via a VIP XD that the upper-right quadrant should be used to display the alarm image by selecting decoder 2.

SSL encryption

The data for the connection, for example the password, can be securely transmitted with SSL encryption. If you have selected the **On** option, only encrypted ports are offered in the **Remote port** parameter.

**NOTICE!**

Please note that the SSL encryption must be activated and configured at both ends of a connection. This requires the appropriate certificates to be uploaded onto the IP AutoDome (see *Page 116*).

You can activate and configure encryption of the media data (video, audio and metadata) on the **Encryption** page (see *Section 10.56 Advanced Mode: Encryption, page 115*).

Auto-connect

Select the **On** option to automatically re-establish a connection to one of the previously specified IP addresses after each reboot, after a connection breakdown or after a network failure.

**NOTICE!**

In the default setting, Stream 2 is transmitted for automatic connections. Bear this fact in mind when assigning the profile (see *Section 10.16 Advanced Mode: Encoder Profile, page 78*).

Audio

Select the **On** option if you wish to additionally transmit a standalone G.711 encoded audio stream with alarm connections.

10.45**Advanced Mode: VCA**

The IP AutoDome contains an integrated video content analysis (VCA), which can detect and analyze changes in the signal using image processing algorithms. Such changes can be due to movements in the camera's field of view.

You can select various VCA configurations and adapt these to your application as required.

The **Silent MOTION+** configuration is active by default. In this configuration, metadata is created to facilitate searches of recordings; however, no alarm is triggered.

You can switch off the video content analysis completely if the device's full power is to be made available for the encoder.

1. Select a VCA configuration and make the required settings.
2. If necessary, click the **Default** button to return all settings to their default values.

10.46**Advanced Mode: VCA Profiles**

You can configure two profiles with different VCA configurations. You can save profiles on your computer's hard drive and load saved profiles from there. This can be useful if you want to test a number of different configurations. Save a functioning configuration and test new settings. You can use the saved configuration to restore the original settings at any time.

**NOTICE!**

If computing power becomes short, the highest priority is always the live images and recordings. This can lead to impairment of the video content analysis. You should therefore observe the processor load and optimize the encoder settings or the video content analysis settings as necessary.

1. Select a VCA profile and enter the required settings.
2. If necessary, click the **Default** button to return all settings to their default values.
3. Click the **Save...** button to save the profile settings to another file. A new window is opened, in which you can specify where you want to save the file and what name you want to save it under.
4. Click the **Load...** button to load a saved profile. A new window opens in which you can select the profile file and specify where to save the file.

VCA configuration

Select one of the profiles here to activate it or edit it.

You can rename the profile.

1. To rename the file, click the icon to the right of the list field and enter the new profile name in the field.
2. Click the icon again. The new profile name is saved.

Alarm status

The alarm status is displayed here for information purposes. This means you can check the effects of your settings immediately.

Aggregation time (s)

You can set an aggregation time of between 0 and 20 seconds if necessary. The aggregation time always starts when an alarm event occurs. It extends the alarm event by the value set. This prevents alarm events that occur in quick succession from triggering several alarms and successive events in a rapid sequence. No further alarm is triggered during the aggregation time.

The post-alarm time set for alarm recordings only starts once the aggregation time has expired (see *Section 10.40 Advanced Mode: Recording Profiles, page 95*).

Analysis type

Select the required analysis algorithm. By default, only **MOTION+** is available – this offers a motion detector and essential recognition of tampering.

**NOTICE!**

Additional analysis algorithms with comprehensive functions, such as IVMD and IVA, are available from Bosch Security Systems.

If you select one of these algorithms, you can set the corresponding parameters here directly. You can find information on this in the relevant documents on the product CD supplied.

Metadata is always created for a video content analysis, unless this was explicitly excluded. Depending on the analysis type selected and the relevant configuration, additional information overlays the video image in the preview window next to the parameter settings. With the **MOTION+** analysis type, for example, the sensor fields in which motion is recorded will be marked with rectangles.

**NOTICE!**

On the **LIVEPAGE Functions** page, you can also enable additional information overlays for the **LIVEPAGE** (see *Section 10.13 Advanced Mode: LIVEPAGE Functions, page 76*).

Motion detector (MOTION+ only)

For the detector to function, the following conditions must be met:

- Analysis must be activated.
- At least one sensor field must be activated.
- The individual parameters must be configured to suit the operating environment and the desired responses.
- The sensitivity must be set to a value greater than zero.

**CAUTION!**

Reflections of light (off glass surfaces, etc.), switching lights on or off or changes in the light level caused by cloud movement on a sunny day can trigger unintended responses from the motion detector and generate false alarms. Run a series of tests at different times of the day and night to ensure that the video sensor is operating as intended.

For indoor surveillance, ensure constant lighting of the areas during the day and at night.

Sensitivity (MOTION+ only)

The basic sensitivity of the motion detector can be adjusted for the environmental conditions to which the camera is subject.

The sensor reacts to variations in the brightness of the video image. The darker the observation area, the higher the value that must be selected.

Minimum object size (MOTION+ only)

You can specify the number of sensor fields that a moving object must cover to generate an alarm. This is to prevent objects that are too small from triggering an alarm.

A minimum value of **4** is recommended. This value corresponds to four sensor fields.

Debounce time 1 s (MOTION+ only)

The debounce time is intended to prevent very brief alarm events from triggering individual alarms. If the **Debounce time 1 s** option is activated, an alarm event must last at least 1 second to trigger an alarm.

Select Area (MOTION+ only)

The areas of the image to be monitored by the motion detector can be selected. The video image is subdivided into square sensor fields. Each of these fields can be activated or deactivated individually. If you wish to exclude particular regions of the camera's field of view from monitoring due to continuous movement (by a tree in the wind, etc.), the relevant fields can be deactivated.

1. Click **Select Area** to configure the sensor fields. A new window will open.
2. If necessary, click **Clear All** first to clear the current selection (fields marked yellow).
3. Left-click the fields to be activated. Activated fields are marked yellow.
4. If necessary, click **Select All** to select the entire video frame for monitoring.
5. Right-click any fields you wish to deactivate.
6. Click **OK** to save the configuration.
7. Click the close button **X** in the window title bar to close the window without saving the changes.

Tamper detection

You can reveal the tampering of cameras and video cables by means of various options. Run a series of tests at different times of the day and night to ensure that the video sensor is operating as intended.

**NOTICE!**

The options for tamper detection can only be set for fixed cameras. Dome cameras or other motorized cameras cannot be protected in this manner as the movement of the camera itself causes changes in the video image that are too great.

Sensitivity**NOTICE!**

This and the following parameter are only accessible if the reference check is activated.

The basic sensitivity of the tamper detection can be adjusted for the environmental conditions to which the camera is subject.

The algorithm reacts to the differences between the reference image and the current video image. The darker the observation area, the higher the value that must be selected.

Trigger delay (s)

You can set delayed alarm triggering. The alarm is only triggered after a set time interval in seconds has elapsed and then only if the triggering condition still exists. If the original condition has been restored before this time interval elapses, the alarm is not triggered. This allows you to avoid false alarms triggered by short-term changes, for example cleaning activities in the direct field of vision of the camera.

Global change

You can set how large the global change in the video image must be for an alarm to be triggered. This setting is independent of the sensor fields selected under **Select Area**. Set a high value if fewer sensor fields need to change to trigger an alarm. With a low value, it is necessary for changes to occur simultaneously in a large number of sensor fields to trigger an alarm.

This option allows you to detect, independently of motion alarms, manipulation of the orientation or location of a camera resulting from turning the camera mount bracket, for instance.

Global change

Activate this function if the global change, as set with the **Global change** slide control, should trigger an alarm.

Scene too bright

Activate this function if tampering associated with exposure to extreme light (for instance, shining a flashlight directly on the lens) should trigger an alarm. The average brightness of the scene provides a basis for recognition.

Scene too dark

Activate this function if tampering associated with covering the lens (for instance, by spraying paint on it) should trigger an alarm. The average brightness of the scene provides a basis for recognition.

Scene too noisy

Activate this function if tampering associated with EMC interference (noisy scene as the result of a strong interference signal in the vicinity of the video lines), as an example, should trigger an alarm.

Reference check

You can save a reference image that is continuously compared with the current video image. If the current video image in the marked areas differs from the reference image, an alarm is triggered. This allows you to detect tampering that would otherwise not be detected, for example if the camera is turned.

1. Click **Reference** to save the currently visible video image as a reference.
2. Click **Select Area** and select the areas in the reference image that are to be monitored.
3. Check the box **Reference check** to activate on-going matching. The stored reference image is displayed in black and white below the current video image, and the selected areas are marked in yellow.
4. Select the **Disappearing edges** or **Appearing edges** option to specify the reference check once again.

Disappearing edges

The area selected in the reference image should contain a prominent structure. If this structure is concealed or moved, the reference check triggers an alarm. If the selected area is too homogenous, so that concealing and moving the structure would not trigger an alarm, then an alarm is triggered immediately to indicate the inadequate reference image.

Appearing edges

Select this option if the selected area of the reference image includes a largely homogenous surface. If structures appear in this area, then an alarm is triggered.

Select Area

You can select the image areas in the reference image that are to be monitored. The video image is subdivided into square fields. Each of these fields can be activated or deactivated individually.

**NOTICE!**

Select only those areas for reference monitoring in which no movement takes place and that are always evenly lit, as false alarms could otherwise be triggered.

1. Click **Select Area** to configure the sensor fields. A new window will open.
2. If necessary, click **Clear All** first to clear the current selection (fields marked yellow).
3. Left-click the fields to be activated. Activated fields are marked yellow.
4. If necessary, click **Select All** to select the entire video frame for monitoring.
5. Right-click any fields you wish to deactivate.
6. Click **OK** to save the configuration.
7. Click the close button **X** in the window title bar to close the window without saving the changes.

10.47**Advanced Mode: VCA Scheduled**

This configuration allows you to link the created VCA profile with the days and times at which the video content analysis is to be active.

You can link any number of 15-minute intervals with the VCA profiles for each day of the week. Moving the mouse cursor over the table displays the time below it. This aids orientation. In addition to the normal weekdays, you can define holidays that are not in the standard weekly schedule on which recordings are to apply. This allows you to apply a schedule for Sundays to other days with dates that fall on varying weekdays.

1. Click the profile you want to link in the **Time periods** field.
2. Click in a field in the table, hold down the mouse button and drag the cursor over all the periods to be assigned to the selected profile.
3. Use the right mouse button to deselect any of the intervals.
4. Click the **Select All** button to link all time intervals to the selected profile.
5. Click the **Clear All** button to deselect all of the intervals.
6. When you are finished, click the **Set** button to save the settings in the unit.

Holidays

You can define holidays on which a profile should be active that are different to the standard weekly schedule. This allows you to apply a schedule for Sundays to other days with dates that fall on varying weekdays.

1. Click the **Holidays** tab. Any days that have already been selected will be shown in the table.
2. Click the **Add** button. A new window will open.
3. Select the desired date from the calendar. You can select several consecutive calendar days by holding down the mouse button. These will later be displayed as a single entry in the table.
4. Click **OK** to accept the selection. The window will close.
5. Assign the individual holidays to the VCA profiles, as described above.

Deleting Holidays

You can delete holidays you have defined yourself at any time.

1. Click the **Delete** button. A new window will open.
2. Click the date you wish to delete.
3. Click **OK**. The item will be deleted from the table and the window will close.
4. The process must be repeated for deleting additional days.

10.48 Advanced Mode: VCA Event triggered

This configuration allows you stipulate that the video content analysis is only to be activated when triggered by an event. As long as no trigger is activated, the **Silent MOTION+** configuration in which metadata is created is active; this metadata facilitates searches of recordings, but does not trigger an alarm.

Trigger

You can select one of the physical alarms on the device's alarm inputs or one of the virtual alarms as a trigger. A virtual alarm is created using software, with RCP+ commands or alarm scripts, for example.



NOTICE!

For more information, please see the **Alarm Task Script Language** document and the RCP+ documentation.

Trigger active

Select the VCA configuration here that is to be enabled via an active trigger. A green check mark to the right of the list field indicates that the trigger is active.

Trigger inactive

Select the VCA configuration here that is to be activated if the trigger is not active. A green check mark to the right of the list field indicates that the trigger is inactive.

Delay (s)

Select the delay period here for the reaction of the video content analysis to trigger signals. The alarm is only triggered after a set time interval in seconds has elapsed and then only if the triggering condition still exists. If the original condition has been restored before this time interval elapses, the alarm is not triggered. A delay period may be useful in avoiding false alarms or frequent triggering, for example. During the delay period, the **Silent MOTION+** configuration is always enabled.

10.49 Advanced Mode: Audio Alarm

The IP AutoDome can create alarms on the basis of audio signals. You can configure signal strengths and frequency ranges in such a way that false alarms, for example due to machine noise or background noise, are avoided.



NOTICE!

First set up normal audio transmission before you configure the audio alarm here (see *Section 10.18 Advanced Mode: Audio, page 80*).

Audio alarm

Select **On** if you want the device to generate audio alarms.

Name

The name makes it easier to identify the alarm in extensive video monitoring systems, for example with the VIDOS and Bosch Video Management System programs. Enter a unique and clear name here.



CAUTION!

Do not use any special characters, for example **&**, in the name. Special characters are not supported by the system's internal recording management and may therefore result in the Player or Archive Player being unable to play back the recording.

Threshold

Set up the threshold on the basis of the signal visible in the graphic. You can set the threshold using the slide control or, alternatively, you can move the white line directly in the graphic using the mouse.

Sensitivity

You can use this setting to adapt the sensitivity to the sound environment. You can effectively suppress individual signal peaks. A high value represents a high level of sensitivity.

Signal Ranges

You can exclude particular signal ranges in order to avoid false alarms. For this reason the total signal is divided into 13 tonal ranges (mel scale). Check or uncheck the boxes below the graphic to include or exclude individual ranges.

10.50**Advanced Mode: Alarm E-Mail**

As an alternative to automatic connecting, alarm states can also be documented by e-mail. In this way it is possible to notify a recipient who does not have a video receiver. In this case, the IP AutoDome automatically sends an e-mail to a previously defined e-mail address.

Send alarm e-mail

Select **On** if you want the unit to automatically send an alarm e-mail in the event of an alarm.

Mail server IP address

Enter the IP address of a mail server that operates on the SMTP standard (Simple Mail Transfer Protocol). Outgoing e-mails are sent to the mail server via the address you entered. Otherwise leave the box blank (**0.0.0.0**).

SMTP user name

Enter a registered user name for the chosen mailserver here.

SMTP password

Enter the required password for the registered user name here.

Format

You can select the data format of the alarm message.

- **Standard (with JPEG)**
E-mail with attached JPEG image file.
- **SMS**
E-mail in SMS format to an e-mail-to-SMS gateway (for example to send an alarm by cellphone) without an image attachment.

**CAUTION!**

When a cellphone is used as the receiver, make sure to activate the e-mail or SMS function, depending on the format, so that these messages can be received.

You can obtain information on operating your cellphone from your cellphone provider.

Attach JPEG from camera

Click the checkbox to specify that JPEG images are sent from the camera. An enabled video input is indicated by a check mark.

Destination address

Enter the e-mail address for alarm e-mails here. The maximum address length is 49 characters.

Sender name

Enter a unique name for the e-mail sender, for example the location of the unit. This will make it easier to identify the origin of the e-mail.

Test e-mail

You can test the e-mail function by clicking the **Send Now** button. An alarm e-mail is immediately created and sent.

10.51**Advanced Mode: Alarm Task Editor****CAUTION!**

Editing scripts on this page overwrites all settings and entries on the other alarm pages. This procedure cannot be reversed.

In order to edit this page, you must have programming knowledge and be familiar with the information in the **Alarm Task Script Language** document.

As an alternative to the alarm settings on the various alarm pages, you can enter your desired alarm functions in script form here. This will overwrite all settings and entries on the other alarm pages.

1. Click the **Examples** link under the **Alarm Task Editor** field to see some script examples. A new window will open.
2. Enter new scripts in the **Alarm Task Editor** field or change existing scripts in line with your requirements.
3. When you are finished, click the **Set** button to transmit the scripts to the unit. If the transfer was successful, the message **Script successfully parsed** is displayed over the text field. If it was not successful, an error message will be displayed with further information.

10.52 Advanced Mode: Network

The settings on this page are used to integrate the IP AutoDome into an existing network. Some changes only take effect after the unit is rebooted. In this case, the **Set** button changes to **Set and Reboot**.

1. Make the desired changes.
2. Click the **Set and Reboot** button. The IP AutoDome is rebooted and the changed settings are activated.



CAUTION!

If you change the IP address, subnet mask or gateway address, the IP AutoDome is only available under the new addresses after the reboot.

Automatic IP assignment

If a DHCP server is employed in the network for the dynamic assignment of IP addresses, you can activate acceptance of IP addresses automatically assigned to the IP AutoDome. Certain applications (VIDOS, Bosch Video Management System, Archive Player, Configuration Manager) use the IP address for the unique assignment of the unit. If you use these applications, the DHCP server must support the fixed assignment between IP address and MAC address, and must be appropriately set up so that, once an IP address is assigned, it is retained each time the system is rebooted.

IP address

Enter the desired IP address for the IP AutoDome in this field. The IP address must be valid for the network.

Subnet mask

Enter the appropriate subnet mask for the selected IP address here.

Gateway address

If you want the unit to establish a connection to a remote location in a different subnet, enter the IP address of the gateway here. Otherwise leave the box blank (**0.0.0.0**).

DNS server address

The unit can use a DNS server to trigger an address specified as a name. Enter the IP address of the DNS server here.

Video transmission

If the unit is operated behind a firewall, **TCP (HTTP port)** should be selected as the transfer protocol. For use in a local network, select **UDP**.



CAUTION!

Multicast operation is only possible with the UDP protocol. The TCP protocol does not support multicast connections.

The MTU value in UDP mode is 1,514 bytes.

HTTP browser port

Select a different HTTP browser port from the list if required. The default HTTP port is 80. If you want to allow only secure connections via HTTPS, you must deactivate the HTTP port. In this case, select **Off**.

HTTPS browser port

If you wish to allow browser access on the network via a secure connection, select an HTTPS browser port from the list if necessary. The default HTTPS port is 443. Select the **Off** option to deactivate HTTPS ports; only unsecured connections will now be possible.

The IP AutoDome uses the TLS 1.0 encryption protocol. You may have to activate this protocol via your browser configuration. You must also activate the protocol for the Java applications (via the Java control panel in the Windows control panel).

**NOTICE!**

If you want to allow only secure connections with SSL encryption, you must select the **Off** option for each of the parameters **HTTP browser port**, **RCP+ port 1756** and **Telnet support**. This deactivates all unsecured connections. Connections will then only be possible via the HTTPS port.

You can activate and configure encryption of the media data (video, audio and metadata) on the **Encryption** page (see *Section 10.56 Advanced Mode: Encryption, page 115*).

RCP+ port 1756

To exchange connection data, you can activate the unsecured RCP+ port 1756. If you want connection data to be transmitted only when encrypted, select the **Off** option to deactivate the port.

Telnet support

If you want to allow only secure connections with encrypted data transmission, you must select the **Off** option to deactivate Telnet support. The unit will then no longer be accessible using the Telnet protocol.

Interface mode ETH

If necessary, select the Ethernet link type for the **ETH** interface. Depending on the unit connected, it may be necessary to select a special operation type.

Network MSS (Byte)

You can set the maximum segment size for the IP packet's user data. This gives you the option to adjust the size of the data packets to the network environment and to optimize data transmission. Please comply with the MTU value of 1,514 bytes in UDP mode.

iSCSI MSS (Byte)

You can specify a higher MSS value for a connection to the iSCSI system than for the other data traffic via the network. The potential value depends on the network structure. A higher value is only useful if the iSCSI system is located in the same subnet as the IP AutoDome.

Enable DynDNS

DynDNS.org is a DNS hosting service that stores IP addresses in a database ready for use. It allows you to select the IP AutoDome via the Internet using a host name, without having to know the current IP address of the unit. You can enable this service here. To do this, you must have an account with DynDNS.org and you must have registered the required host name for the unit on that site.

**NOTICE!**

Information about the service, registration process and available host names can be found at DynDNS.org.

Host name

Enter the host name registered on DynDNS.org for the IP AutoDome here.

User name

Enter the user name you registered at DynDNS.org here.

Password

Enter the password you registered at DynDNS.org here.

Force registration now

You can force the registration by transferring the IP address to the DynDNS server. Entries that change frequently are not provided in the Domain Name System. It is a good idea to force the registration when you are setting up the device for the first time. Only use this function when necessary and no more than once a day, to avoid the possibility of being blocked by the service provider. To transfer the IP address of the IP AutoDome, click the **Register** button.

Status

The status of the DynDNS function is displayed here for information purposes. You cannot change any of these settings.

10.53

Advanced Mode: Advanced

The settings on this page are used to implement advanced settings for the network.

Some changes only take effect after the unit is rebooted. In this case, the **Set** button changes to **Set and Reboot**.

1. Make the desired changes.
2. Click the **Set and Reboot** button. The IP AutoDome is rebooted and the changed settings are activated.

SNMP

The IP AutoDome supports the SNMP V2 (Simple Network Management Protocol) for managing and monitoring network components, and can send SNMP messages (traps) to IP addresses. The unit supports SNMP MIB II in the unified code. If you wish to send SNMP traps, enter the IP addresses of one or two required target devices here.

If you select **On** for the **SNMP** parameter and do not enter an SNMP host address, the IP AutoDome does not send them automatically, but only replies to SNMP requests. If you enter one or two SNMP host addresses, SNMP traps are sent automatically. Select **Off** to deactivate the SNMP function.

1. SNMP host address / 2. SNMP host address

If you wish to send SNMP traps automatically, enter the IP addresses of one or two required target units here.

SNMP traps

You can select which traps are to be sent.

1. Click **Select**. A list is opened.
2. Click the checkboxes to select the required traps. All the checked traps will be sent.
3. Click **Set** to accept the selection.

Authentication

If a RADIUS server is employed in the network for managing access rights, authentication must be activated here to allow communication with the unit. The RADIUS server must also contain the corresponding data.

To configure the unit, you must connect the IP AutoDome directly to a computer using a network cable. This is because communication via the network is not enabled until the

Identity and **Password** parameters have been set and successfully authenticated.

Identity

Enter the name that the RADIUS server is to use for identifying the IP AutoDome.

Password

Enter the password that is stored in the RADIUS server.

RTSP port

If necessary, select a different port for the exchange of the RTSP data from the list. The standard RTSP port is 554. Select **Off** to deactivate the RTSP function.

NTCIP

Specifies a set of rules and protocols for organizing, describing and exchanging transportation management information between transportation management applications and transportation equipment such that they interoperate with each other.

Select a port for **NTCIP** and the **Address** from the appropriate drop-down lists.

10.54**Advanced Mode: Multicasting**

In addition to a 1:1 connection between an encoder and a single receiver (unicast), the IP AutoDome can enable multiple receivers to receive the video signal from an encoder simultaneously. The device either duplicates the data stream itself and then distributes it to multiple receivers (Multi-unicast) or it sends a single data stream to the network, where the data stream is simultaneously distributed to multiple receivers in a defined group (Multicast). You can enter a dedicated multicast address and port for each stream. You can switch between the streams by clicking the appropriate tabs.

**NOTICE!**

Multicast operation requires a multicast-enabled network that uses the UDP and the Internet Group Management IGMP protocols. Other group management protocols are not supported. The TCP protocol does not support multicast connections.

A special IP address (class D address) must be configured for multicast operation in a multicast-enabled network.

The network must support group IP addresses and the Internet Group Management Protocol (IGMP V2). The address range is from 225.0.0.0 to 239.255.255.255.

The multicast address can be the same for multiple streams. However, it will be necessary to use a different port in each case so that multiple data streams are not sent simultaneously using the same port and multicast address.

**NOTICE!**

The settings must be made individually for each stream.

Enable

To enable simultaneous data reception on several receivers you need to activate the multicast function. To do this, check the box. You can then enter the multicast address.

Multicast Address

Enter a valid multicast address for each stream to be operated in multicast mode (duplication of the data streams in the network).

With the setting **0.0.0.0** the encoder for the relevant stream operates in multi-unicast mode (copying of data streams in the unit). The IP AutoDome supports multi-unicast connections for up to five simultaneously connected receivers.

**NOTICE!**

Duplication of data places a heavy demand on the unit and can lead to impairment of the image quality under certain circumstances.

Port

Assign a different port to each data stream if there are simultaneous data streams at the same multicast address.

Enter the port address of the required stream here.

Streaming

Click the checkbox to activate multicast streaming mode for the relevant stream. An enabled stream is indicated by a check mark.

Streaming is typically not required for standard multicast operation.

Multicast packet TTL

You can enter a value to specify how long the multicast data packets are active on the network. This value must be greater than one if multicast is to be run via a router.

10.55

Advanced Mode: JPEG Posting

You can save individual JPEG images on an FTP server at specific intervals. You can then retrieve these images at a later date to reconstruct alarm events if required.

Image size

Select the resolution you wish the JPEG images to have:

- **Medium**
352 × 288/240 pixels (CIF)
- **Large**
704 × 576/480 pixels (4CIF)

File name

You can select how file names will be created for the individual images that are transmitted.

- **Overwrite**
The same file name is always used and any existing file will be overwritten with the current file.
- **Increment**
A number from 000 to 255 is added to the file name and automatically incremented by 1. When it reaches 255 it starts again from 000.
- **Date/time suffix**
The date and time are automatically added to the file name. When setting this parameter, ensure that the unit's date and time are always correctly set. Example: the file snap011005_114530.jpg was stored on October 1, 2005 at 11:45 and 30 seconds.

Posting interval

Enter the interval in seconds at which the images will be sent to an FTP server. Enter zero if you do not want any images to be sent.

FTP server IP address

Enter the IP address of the FTP server on which you wish to save the JPEG images.

FTP server login

Enter your login name for the FTP server.

FTP server password

Enter the password that gives you access to the FTP server.

Path on FTP server

Enter the exact path on which you wish to post the images on the FTP server.

**NOTICE!**

The creation of JPEG images has a lower priority than video encoding and image analysis. This can result in JPEG images being created with a delay of up to several seconds after the triggering event. If reliable, real-time recording of the alarm is required, ensure that the encoder has enough computing power available.

10.56**Advanced Mode: Encryption**

A special license, with which you will receive a corresponding activation key, is required to encrypt user data. You can enter the activation key to release the function on the **Licenses** page (see *Section 10.58 Advanced Mode: Licenses, page 116*).

10.57**Advanced Mode: Maintenance****Firmware**

The IP AutoDome is designed in such a way that its functions and parameters can be updated with firmware. To do this, transfer the current firmware package to the unit via the selected network. It will then be automatically installed there.

In this way, an IP AutoDome can be serviced and updated remotely without a technician having to change the installation on site.

You obtain the current firmware and the detailed *VG4 Firmware Update Manual* from customer service or from the download area at www.boschsecurity.com.

**CAUTION!**

Before launching the firmware upload make sure that you have selected the correct upload file. Uploading the wrong files can result in the unit no longer being addressable, in which case you must replace the unit.

You should never interrupt the installation of firmware. An interruption can lead to the flash-EEPROM being incorrectly programmed. This in turn can result in the unit no longer being addressable, in which case it will have to be replaced. Even changing to another page or closing the browser window leads to an interruption.

Refer to the *VG4 Firmware Update Manual* (available on www.boschsecurity.com) for complete instructions.

Configuration

You can save configuration data for the IP AutoDome on a computer and then load saved configuration data from a computer to the unit.

Upload

1. Enter the full path of the file to upload or click **Browse** to select the required file.
2. Make certain that the file to be loaded comes from the same unit type as the unit you want to configure.
3. Next, click **Upload** to begin transferring the file to the unit. The progress bar allows you to monitor the transfer.

Once the upload is complete, the new configuration is activated. The time remaining is shown by the message **going to reset Reconnecting in ... seconds**. The unit reboots automatically once the upload has successfully completed.

Download

1. Click the **Download** button. A dialog box opens.
2. Follow the on-screen instructions to save the current settings.

SSL certificate

To be able to work with an SSL encrypted data connection, both ends of a connection must hold the relevant certificates. You can upload the SSL certificate, comprising one or multiple files, onto the IP AutoDome.

If you wish to upload multiple files onto the IP AutoDome, you must select them consecutively.

1. Enter the full path of the file to upload or click **Browse** to select the required file.
2. Next, click **Upload** to begin transferring the file to the unit.
3. Once all files have been successfully uploaded, the unit must be rebooted. In the address bar of your browser, enter **/reset** after the IP address of the IP AutoDome (for example **192.168.0.10/reset**).

The new SSL certificate is valid.

Maintenance log

You can download an internal maintenance log from the unit to send it to Customer Service for support purposes. Click **Download** and select a storage location for the file.

10.58**Advanced Mode: Licenses**

You can enter the activation key to release additional functions or software modules.

**NOTICE!**

The activation key cannot be deactivated again and is not transferable to other units.

10.59**Advanced Mode: System Overview**

The data on this page are for information purposes only and cannot be changed. Keep a record of this information in case technical assistance is required.

**NOTICE!**

You can select all required text on this page with the mouse and copy it to the clipboard with the [Ctrl]+[C] key combination, for example if you want to send it via e-mail.

11 Troubleshooting Guide

11.1 VG4 AutoDome Operation and Control

Problem	Solution
No video	<ul style="list-style-type: none"> – Check that the Green LED on the AutoDome CPU board is on. This LED indicates video from the camera. <p>If the Green LED is off, then:</p> <ul style="list-style-type: none"> – Check that the Red LED on the AutoDome CPU board is slowly blinking. This LED indicates power to the AutoDome power supply board and to the CPU Module. <p>Red LED on AutoDome CPU Module</p> <p>Flash Sequence Indicates:</p> <ul style="list-style-type: none"> – 5 sec. on / 0.5 sec. off: Normal operation – Steady on: CPU is locked <p>If the Red LED is on steady, then:</p> <ul style="list-style-type: none"> – Try cycling the AutoDome power off and on. <p>If the Red LED is off, then:</p> <p>If using a Bosch Pendant Power Supply Box:</p> <ul style="list-style-type: none"> – Check that Green LED in Power Supply Box is on. This LED indicates mains power through the transformer. <p>If the Green LED is off, then:</p> <ul style="list-style-type: none"> – Turn off the Power. – Check the FX101 fuse for mains power to the Power Supply Box. <p>If O.K., then:</p> <ul style="list-style-type: none"> – Check the FX102 fuse for 24 V power to the AutoDome Pendant. <p>If O.K., then:</p> <p>If using a non-Bosch power supply:</p> <ul style="list-style-type: none"> – Check that the mains power to the power supply box is on. <p>If O.K., then:</p> <ul style="list-style-type: none"> – Check that there is 24 V output from the transformer. – Check the connector on top of the AutoDome housing for bent pins. <p>If O.K., then:</p> <ul style="list-style-type: none"> – Check the integrity of all wires and terminal connections to the AutoDome. <p>If O.K., then:</p> <p>If there is power to the AutoDome, then:</p> <ul style="list-style-type: none"> – Remove the camera and CPU modules from the AutoDome housing and check that the Green LED on the housing power supply board is on. <p>If the Green LED is off, then:</p> <ul style="list-style-type: none"> – Check that the fuse on the housing power supply board is good. (Try replacing the unit, if an extra camera module is available.)

No camera control	<ul style="list-style-type: none"> - Ensure that the keyboard and monitor are set to the correct (same) camera number. <p>If O.K., then:</p> <ul style="list-style-type: none"> - Check that the camera address is properly set. Enter ON-997-ENTER to display the camera address. <p>If address is not set or is incorrect, then:</p> <ul style="list-style-type: none"> - Set the camera address using FastAddress (ON-998-ENTER). <p>If O.K., then:</p> <ul style="list-style-type: none"> - Check that the Amber LED on the AutoDome CPU turns on when receiving pan/tilt commands from the controller keyboard. The Amber LED indicates control is being received. <p>Amber LED on AutoDome CPU Module</p> <p>Flash Sequence</p> <ul style="list-style-type: none"> - Off No incoming communications or no power - Solid for 2 seconds Receiving good data - Fast blinking Lost packet(s) <p>If amber LED does not light when given PTZ commands, then:</p> <ul style="list-style-type: none"> - Check if other cameras on the system can be controlled. If not, check the controller and wiring connections. <p>If O.K., then:</p> <ul style="list-style-type: none"> - Check that the RS-232/485 selector switch is properly set to the proper protocol. <p>If O.K., then:</p> <ul style="list-style-type: none"> - Ensure that all Biphas, Bilinx, or RS-232/485 wires are properly connected. See the <i>AutoDome Modular Camera System Installation Manual</i>. <p>If O.K., then:</p> <ul style="list-style-type: none"> - Check if you can access the AutoDome OSD menus (ON-46-ENTER). <p>If O.K., then:</p> <ul style="list-style-type: none"> - Confirm that the AutoDome passes homing (SET-110-ENTER). <p>If AutoDome fails homing, then:</p> <ul style="list-style-type: none"> - Contact Bosch Technical Support.
Intermittent camera control	<ul style="list-style-type: none"> - Check that only the last AutoDome in a daisy chain configuration is terminated with a 110 Ω resistor across the +/- biphase terminals. <p>If O.K., then:</p> <ul style="list-style-type: none"> - Check that the maximum wire distance has not been exceeded for the control protocol (the maximum distance for RS-232 is 50 feet). See the <i>AutoDome Modular Camera System Installation Manual</i>. <p>If O.K., then:</p> <ul style="list-style-type: none"> - Check that all wiring meets Bosch recommended standards and specifications. See the <i>AutoDome Modular Camera System Installation Manual</i>.
Camera moves when moving other cameras	<ul style="list-style-type: none"> - Check that the camera address is properly set (ON-997-ENTER). If the camera address is not set, the AutoDome responds to control commands to any camera on the system. <p>If camera address is not set, then:</p> <ul style="list-style-type: none"> - Invoke the FastAddress Menu to assign a camera address (ON-998-ENTER).
Cannot access user settings	<ul style="list-style-type: none"> - Enter the unlock command OFF-90-ENTER. This command may require a password. (Commands automatically lock in 30 minutes.)

Setting FastAddress with an American Dynamics Keyboard	The FastAddress value must match the Unique Identifier for the AutoDome. To set the FastAddress on an American Dynamics keyboard refer to <i>Section 4.1 Setting FastAddress with Alternative Protocols, page 33.</i>
Picture is dark	<ul style="list-style-type: none"> – Check that the Gain Control is set to AUTO (ON-43-ENTER). <p>If O.K., then:</p> <ul style="list-style-type: none"> – Check that the Auto Iris Level is set to the appropriate level (ON-11-ENTER). <p>If O.K., then:</p> <ul style="list-style-type: none"> – Check that the video coax is terminated with 75 Ω only at the head end. (Double termination causes dark video.) <p>If O.K., then:</p> <ul style="list-style-type: none"> – Go to the Camera Setup Menu and increase the Pre-Compensation setting. (This feature is available only on 300 and 500i non-IP Series AutoDomes). <p>If O.K., then:</p> <ul style="list-style-type: none"> – Check that the camera lens cover is removed. <p>If O.K., then:</p> <ul style="list-style-type: none"> – Check that the maximum coax distance has not been exceeded. See the <i>AutoDome Modular Camera System Installation Manual</i>. <p>If O.K., then:</p> <ul style="list-style-type: none"> – Restore all camera settings (ON-40-ENTER).
Colors are not correct	<ul style="list-style-type: none"> – Reset the White Balance to the appropriate selection (ON-30-ENTER). <p>If O.K., then:</p> <ul style="list-style-type: none"> – Go to the Camera Setup Menu and increase the Pre-Compensation setting. (This feature is available only on 300 and 500i non-IP Series AutoDomes). <p>If O.K., then:</p> <ul style="list-style-type: none"> – Check that the maximum coax distance has not been exceeded. See the <i>AutoDome Modular Camera System Installation Manual</i>. <p>If O.K., then:</p> <ul style="list-style-type: none"> – Restore the default settings (ON-40-ENTER).
Background is too bright to see subject	<ul style="list-style-type: none"> – Turn on backlight compensation (ON-20-ENTER).
Video is rolling, noisy or distorted	<ul style="list-style-type: none"> – Ensure that the Synch Mode is set to Internal (OFF-42-ENTER). <p>If O.K., then:</p> <ul style="list-style-type: none"> – Check that the maximum coax distance has not been exceeded. See the <i>AutoDome Modular Camera System Installation Manual</i>. <p>If O.K., then:</p> <ul style="list-style-type: none"> – Check the integrity of all BNC connectors and splices. Note: Connecting a network cable to the interface board of a non-IP AutoDome causes video distortion. – Remove the network cable from the interface board RJ-45 connector. <p>If O.K., then:</p> <ul style="list-style-type: none"> – Contact Bosch Technical Support.
Day/Night camera does not switch automatically when image is dark	<ul style="list-style-type: none"> – Check that the Day/Night mode is set to AUTO (ON-56-ENTER). <p>If O.K., then:</p> <ul style="list-style-type: none"> – Set Gain Control to AUTO (ON-43-ENTER).

Inside of EnviroDome bubble is foggy	<ul style="list-style-type: none"> – Check the status of the Heater Module (ON-66-ENTER). <p>If status reports Heater No Power, then:</p> <ul style="list-style-type: none"> – Turn off the power to the AutoDome. – Check the FX103 fuse in the Power Supply Box for power (24 V) to the heater module. <p>If O.K., then:</p> <ul style="list-style-type: none"> – Check all wiring and connector pins to the heater module.
Low Voltage flashing on monitor display	<ul style="list-style-type: none"> – If using a non-Bosch power supply, confirm that it meets the Bosch AutoDome power ratings. See the AutoDome Datasheet for specifications. <p>If O.K., then:</p> <ul style="list-style-type: none"> – Check the mains input line voltage. <p>If O.K., then:</p> <ul style="list-style-type: none"> – Check that the maximum wire length from the power supply has not been exceeded. See the <i>AutoDome Modular Camera System Installation Manual</i>. <p>If O.K., then:</p> <ul style="list-style-type: none"> – Measure the AC voltage input to the camera while power is applied to the camera. The voltage must be ≥ 21 VAC to stop the message.

11.2 VG4 IP AutoDome Video and Control

Problem	Solution
No Network Connection	<ul style="list-style-type: none"> – Check all network connections <ul style="list-style-type: none"> – Ensure that the maximum distance between any two Ethernet connections is 100 m (328 ft) or less. <p>Refer to the <i>AutoDome Modular Camera System Installation Manual</i> for more information.</p> <p>If O.K., then:</p> <ul style="list-style-type: none"> – If you are behind a firewall, ensure that the Video Transmission mode is set to UDP. <ol style="list-style-type: none"> a. Access the Settings Web page for the IP-enabled device. b. Expand the Service Settings link, then click Network. c. Select UDP from the Video Transmission drop-down list. Then click Set.

11.3 VG4 IP AutoDome Audio

The following diagrams illustrate the path for audio transmissions between a microphone/ AutoDome and a computer that plays the audio. The first diagram illustrates these connections with an IP-enabled VG4 AutoDome and the second illustration uses an analog (standard) VG4 AutoDome. Use the appropriate diagram to help troubleshoot any audio issues.

Audio Connections with an IP-enabled VG4 AutoDome

The IP-enabled AutoDome uses an Ethernet connection to connect directly to an existing network.

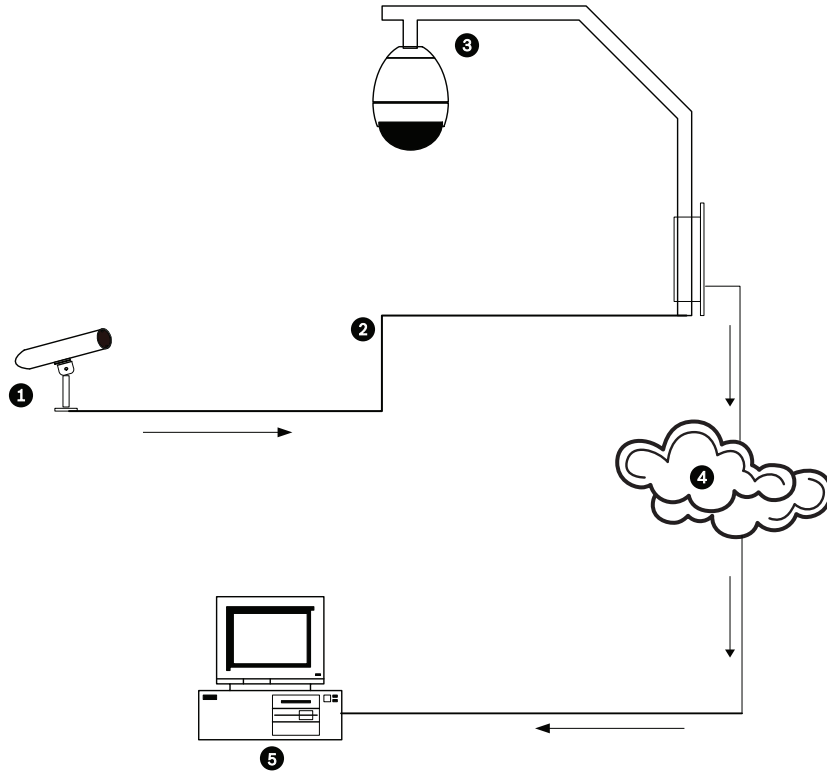


Figure 11.1 Typical Audio Connections for an IP-enabled AutoDome

1	Microphone
2	Coaxial Cable—10 m (33 ft) maximum distance
3	VG4 IP-enabled AutoDome
4	Ethernet Network
5	Computer with Bosch DiBos Software

Audio Connections with an Analog (standard) VG4 AutoDome

In this illustration the analog VG4 AutoDome connects to a Bosch Video/Audio IP Encoder via a coaxial cable. The computer that plays the audio is connected to the encoder via an Ethernet cable.

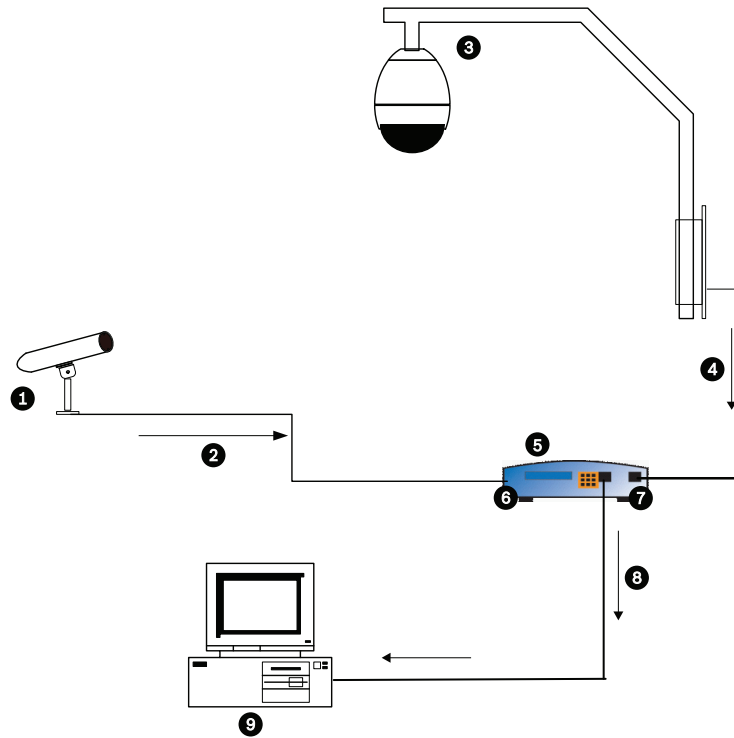


Figure 11.2 Typical Audio Connections for an Analog AutoDome

1	Microphone	6	Audio In
2	Coaxial Connection; Microphone to Bosch Video/Audio Encoder; 10 m (33 ft) maximum distance	7	Video In
3	VG4 Analog (Standard) AutoDome	8	Ethernet Connection; Bosch Video/Audio Encoder to a PC
4	Coaxial Connection; VG4 Analog Autodome to a Bosch Video/Audio Encoder	9	Computer with Bosch DiBos Software
5	Bosch Video/Audio Encoder		

Problem	Solution
No Audio	<ul style="list-style-type: none"> – Check the computer receiving the audio from the VG4 AutoDome or from the IP Encoder. <ul style="list-style-type: none"> – Check the computer’s audio settings. Ensure that the sound levels are at an audible level. – Check the computer’s audio output card and speakers. Play a secondary source of audio on the computer. If you still do not hear audio replace the speakers and try again.
	<p>If O.K., then:</p> <ul style="list-style-type: none"> – Ensure that the Audio option is enabled for the IP device. <ol style="list-style-type: none"> a. Access the Settings Web page for the IP-enabled device. b. Expand the Encoder Settings link, then click Audio Settings. c. Ensure that On is selected from the Enable Audio drop-down list. Then, click Set.
	<p>If O.K., then:</p> <ul style="list-style-type: none"> – Check the microphone. Connect appropriate speakers directly to the microphone at the camera site and confirm that the audio is clear and audible at the location. An audio problem or noise at the source will further degrade as it travels through all the cables and connections.
	<p>If O.K., then:</p> <ul style="list-style-type: none"> – Verify the cable type and installation used for audio connections between the microphone and the VG4 AutoDome. <ul style="list-style-type: none"> – Cable type: Coaxial – Cable length: 10 m (33 ft), maximum Refer to the <i>AutoDome Modular Camera System Installation Manual</i> for more information.

Problem	Solution
	<p>If O.K., then:</p> <ul style="list-style-type: none"> – Check all network connections. <ul style="list-style-type: none"> – If the video is clear and contains no distortion, then the network connections are probably not the source of audio problems. – Ensure that the maximum distance between any two Ethernet connections is 100 m (328 ft). <p>Refer to the <i>AutoDome Modular Camera System Installation Manual</i> for more information.</p>
Poor Audio	<ul style="list-style-type: none"> – Check the computer receiving the audio from the VG4 AutoDome or from the IP Decoder. <ul style="list-style-type: none"> – Check the computer’s audio output card and speakers. Play a secondary source of audio on the computer, if you hear static then replace the speakers and try again. – Check the computer’s audio output card and speakers. Play a secondary source of audio on the computer. If you still do not hear audio replace the speakers and try again. <p>If O.K., then:</p> <ul style="list-style-type: none"> – Check the Gain settings and the peak gain value. <ol style="list-style-type: none"> a. Access the Settings Web page for the IP-enabled device. b. Expand the Encoder Settings link, then click Audio Settings. c. Adjust the Gain level so that the peak value stays within the green area. <p>Refer to the <i>AutoDome Modular Camera System Installation Manual</i> for complete information.</p> <p>If O.K., then:</p> <ul style="list-style-type: none"> – Check the location of the microphone and the audio cables. <ul style="list-style-type: none"> – Line level audio is typically between 700 mV and 2 V so it may be affected by AC power or transmission sources. – Ensure that there is a maximum (at least 1 foot per 100 VAC) distance between the microphone and audio cables and the AC source. <p>If O.K., then:</p> <ul style="list-style-type: none"> – Verify the cable type and installation used for audio connections between the microphone and the VG4 AutoDome. <ul style="list-style-type: none"> – Cable type: Coaxial – Cable length: 10 m (33 ft), maximum <p>Refer to the <i>AutoDome Modular Camera System Installation Manual</i> for more information.</p>

12 User Command Table

Function Key	Comm No.	Command	Description	Series 200	Series 300	Series 500i
On/Off	1	Scan 360°	Autopan without limits	*	*	*
On/Off	2	Autopan	Autopan between limits	*	*	*
On/Off	7	Play Custom Pre-position Tour	Activate/Deactivate		*	*
On/Off	8	Play Pre-position Tour	Activate/Deactivate	*	*	*
On/Off	14	Set Autopan and Scan Speed	Enters speed adjustment slide bar	*	*	*
On/Off	15	Set Pre-position Tour Period (dwell)	Enters dwell adjustment slide bar	*	*	*
On/Off	20	Backlight Comp	Backlight Compensation	*	*	*
On/Off	24	Stabilization	Electronic Stabilization			*
On/Off	26	Wide Dynamic Range (WDR camera only)	Activate/Deactivate		*	*
On	47	View Factory Settings	View all menu default settings	*	*	*
On/Off	50	Playback A, continuous	Activate/Deactivate		*	*
On/Off	51	Playback A, single	Activate/Deactivate		*	*
On/Off	52	Playback B, continuous	Activate/Deactivate		*	*
On/Off	53	Playback B, single	Activate/Deactivate		*	*
On/Off	56	Night Mode menu	On, Off, Auto (Day/Night only)	*	*	*
On/Off	57	Night Mode setting	Enables/Disables Night Mode (Day/Night only)	*	*	*
On	62	Pre-position Title menu	Enters Pre-position Title menu	*	*	*
On	64	Alarm Status	Enters Alarm Status menu		*	*
Off	65	Alarm Acknowledge	Acknowledge alarm or deactivate physical outputs		*	*
On	66	Display software version	Displays software version number	*	*	*
On	72	Re-initialize camera	Performs camera/lens re-initialization functions	*	*	*
On/Off	78	AutoTrack	Turns AutoTrack on or off			*
On/Off	81	Alarm Output 1 Open Collector	On—activates output Off—deactivates output		*	*
On/Off	82	Alarm Output 2 Open Collector	On—activates output Off—deactivates output		*	*
On/Off	83	Alarm Output 3 Open Collector	On—activates output Off—deactivates output		*	*
On/Off	84	Alarm Output 4 Relay	On—activates output Off—deactivates output		*	*
On/Off	90	Command Lock/Unlock	On—lock on Off—lock off	*	*	*
On/Off	100	Record A	Activate/Deactivate		*	*
On/Off	101	Record B	Activate/Deactivate		*	*

Function Key	Comm No.	Command	Description	Series 200	Series 300	Series 500i
On	997	FastAddress, display	Display current address	*	*	*
On	998	FastAddress, all units	Display and program current address	*	*	*
On	999	FastAddress, unaddressed domes	Display and program unaddressed AutoDomes	*	*	*
Set	"1-99"	Pre-position programming	Set ##–programs a preset view	"1-64"	*	*
Shot	"1-99"	Pre-position recall	Shot ##–recall programmed preset	"1-64"	*	*
Set	100	Pre-position menu	Enters the Pre-position menu	*	*	*
Set/Shot	101	Autopan left limit	Set–programs left limit Shot–shows limit	*	*	*
Set/Shot	102	Autopan right limit	Set–programs right limit Shot–shows limit	*	*	*
Set	110	Factory P/T home position	Set–recalibrate home position	*	*	*
Set	900	Edit Tour 1 (Standard)	Enters the Standard Tour Scene menu	*	*	*
Shot	900	Edit Tour 2 (Custom)	Enters the Custom Tour Scene menu		*	*
Set/Shot	901-999	Adds/Removes a preposition shot from Tour 1	Set ###–adds preset Shot ###–removes preset	901-964	*	*

A Appendix: FastAddress Conversions

Sample: If there is video coming from Camera #131, look at the appropriate conversion table below to convert the FastAddress accordingly (i.e. using an AD system 131=3 and using a Sensormatic system 131=32). Ensure that the camera number displayed within the menu on the keyboard represents the converted camera number.

BLOCK 1		BLOCK 2		BLOCK 3		BLOCK 4		BLOCK 5		BLOCK 6		BLOCK 7		BLOCK 8	
Bosch	AD	Bosch	AD	Bosch	AD	Bosch	AD	Bosch	AD	Bosch	AD	Bosc	AD	Bosc	AD
1	1	65	1	129	1	193	1	257	1	321	1	385	1	449	1
2	2	66	2	130	2	194	2	258	2	322	2	386	2	450	2
3	3	67	3	131	3	195	3	259	3	323	3	387	3	451	3
4	4	68	4	132	4	196	4	260	4	324	4	388	4	452	4
5	5	69	5	133	5	197	5	261	5	325	5	389	5	453	5
6	6	70	6	134	6	198	6	262	6	326	6	390	6	454	6
7	7	71	7	135	7	199	7	263	7	327	7	391	7	455	7
8	8	72	8	136	8	200	8	264	8	328	8	392	8	456	8
9	9	73	9	137	9	201	9	265	9	329	9	393	9	457	9
10-64	10-64	74-	10-64	138-	10-64	202-	10-64	266-	10-64	330-	10-64	394-	10-64	458-	10-64
		128		192		256		320		384		448		512	

Table 1.1 Address Conversion Table for AD/Manchester Systems

Group 1		Group 2		Group 3		Group 4		Group 5		Group 6		Group 7		Group 8	
IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	1	100	1	199	1	298	1	397	1	496	1	595	1	694	1
2	2	101	2	200	2	299	2	398	2	497	2	596	2	695	2
3	3	102	3	201	3	300	3	399	3	498	3	597	3	696	3
4	4	103	4	202	4	301	4	400	4	499	4	598	4	697	4
5	5	104	5	203	5	302	5	401	5	500	5	599	5	698	5
6	6	105	6	204	6	303	6	402	6	501	6	600	6	699	6
7	7	106	7	205	7	304	7	403	7	502	7	601	7	700	7
8	8	107	8	206	8	305	8	404	8	503	8	602	8	701	8
9	9	108	9	207	9	306	9	405	9	504	9	603	9	702	9
10-99	10-99	109-	10-99	208-	10-99	307-	10-99	406-	10-99	505-	10-99	604-	10-99	703-	10-99
		198		297		396		495		594		693		792	

Table 1.2 Address Conversion Table for AD/Sensormatic RS-422 Systems

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